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ABSTRACT

This study of the San Mateo Educational Resources Center (SMERC) was undertaken to characterize the use being made of this information service which provides database searches and other information services to educators in 19 California counties and parts of several other states. Requestor characteristics and subjects requested were determined from some 1,000 searches conducted by SMERC in April 1980. Then 48 clients receiving search packages from SMERC in September and October of 1980 were interviewed by telephone about the circumstances of their requests, the uses made of the results, and their satisfaction with the service. Based on an analysis of 1,000 requests, the average use of SMERC can be characterized as concerning the operation of schools in some way. The average request is researched using an ERIC computer search and other tools. The client receives a printout and a select set of microfiche and photocopies of relevant documents. SMERC clients interviewed were found to be happy with the service; all planned to use it again. The interviews uncovered occasional discrepancies between user needs and the request statements that SMERC received. Most clients preferred to receive just a few documents; they frequently neglected to read the microfiche portion of their package. Report appendices include a sample questionnaire, data tables, and related documents. (Author/ESR)

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CLIENT REACTION TO AN
EDUCATIONAL INFORMATION SERVICE:
RESEARCH REPORT

SEPTEMBER 1982

Patricia Taylor Files

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ABSTRACT

CLIENT REACTION TO AN EDUCATIONAL INFORMATION SERVICE

by Patricia Taylor Files

The San Mateo Educational Resources Center (SMERC) was studied in an effort to characterize the use being made of this information service that provides data base searches and other information services to educators in 19 California counties and parts of several other states. Requestor characteristics and subjects requested were determined for some 1000 searches conducted by SMERC in April 1980. Then 48 clients receiving search packages from SMERC in September and October of 1980 were interviewed by telephone about the circumstances of their requests, the uses made of the results, and their satisfaction with the service.

Based on the analysis of 1000 requests, the average use of SMERC can be characterized simply. The request concerns the operation of schools in some way. The request is a new one for SMERC so it is researched using an Educational Resources Information Center (ERIC) computer search and other tools. The client receives a printout and a select set of microfiche and photocopies of relevant documents. The type of client using SMERC varies in the different geographical areas served. Research results are of interest to only ten percent of SMERC clients.

SMERC clients interviewed were found to be happy with the service; all planned to use it again. However, they would only make the effort to use the service if their question was important. The interviews uncovered occasional discrepancies between user needs and the request statements that SMERC received. Because the study treated the entire SMERC service network as an entity, there is no evidence about where the discrepancies originated. Client recollections about how long a search took to arrive often were inaccurate. Few were concerned that their results took some three weeks to arrive. When the search package does arrive, most clients prefer to receive just a few documents. Some that received too much material reacted by reading none of it. Clients frequently neglected to read the microfiche portion of their package. Even if they hadn't read all of the package, clients usually were pleased with their search. They were grateful for the service and predisposed to evaluate it positively. For this reason, interviews were shown to be valuable for uncovering the fine gradations of client reaction to an information service.

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I INTRODUCTION

What is happening when a client uses an automated reference search service? Is the client conducting an extensive search of the literature in order to arrive at a well-thought-out decision or is the client merely seeking additional references to pad the bibliography of an already-written report? There are numerous possibilities between and beyond these two extremes and many similar questions that could be asked, but data to answer them are relatively rare.

The business of automated reference retrieval is enormous. According to figures gathered by Martha Williams, some four million searches were carried out in 1979 (Williams p 27). There is a substantial literature on the theory of information retrieval and more that describes experiments carried out with small test collections. But the conditions attached to most of the theoretical and experimental work are not those of contemporary searching. The large volume of actual searching is done with relatively simple search systems working on large collections of bibliographic files called data bases. They are both simpler and more complex than the experimental models. Little is known about the use of these actual systems because most of them are operated by private businesses. Legitimate concern for the privacy of their customers and their proprietary information lead them to keep operational data secret. For similar reasons, many service centers providing search services to end users are reluctant to compile data about their customers. One major exception are the centers run by government agencies. Supported by public funds, they have an obligation to make data available. They may not compile much data, however, since keeping extensive records and surveying clients are time-consuming tasks that would add to the cost of their service.

The San Mateo Educational Resources Center, known as SMERC, provides an unusual opportunity to gather detailed data on one type of computer search service. SMERC is publicly funded and its clientele is limited to educators whose use of the service is related to their work in public education. Therefore, there is less concern about proprietary information and client privacy. Moreover, the location of SMERC clients within public education agencies makes them relatively easy to contact. Although they have little free time, they are almost always at their place of work five days a week.

Another reason to study SMERC is that the service has been in operation for some ten years. It is a well-established service with a settled clientele. Its size and extent also make it worthy of study. SMERC filled over 10,000 search requests in the 1979-80 school year (SMERC). SMERC clients are located from Alaska to the Virgin Islands in several states and nineteen California counties. A final reason for studying SMERC is that SMERC directors, eager for more data about the effectiveness of their service, were willing to cooperate in the sampling and surveying of their clientele.

The present study of SMERC is a user study only. It attempts to answer two major questions: What are the characteristics of SMERC requests?; and What do clients do with the information provided by SMERC?. Because only users and uses are to be sampled, there will be no data on why other potential clients choose not to use SMERC. SMERC is known to have a percentage of repeat users. The survey should give a figure for the size of this factor. If it is large, one can expect that the level of client satisfaction will be fairly high. One task of the data analysis will be to seek explanations for client satisfaction or dissatisfaction with the search service. Other services offered by SMERC will not be studied directly, but it is probable that client reactions to SMERC searches will be affected by any other contact they may have had with SMERC.

A study of information service use needs to be based on some concept of the general nature of information acquisition. The theory used here is based on Wilson's description of personal information systems in Public Knowledge, Private Ignorance. Personal information gathering aims to collect what we recognize as useful and what we regard as interesting information. The question has to be of some importance to us before we will make an effort to answer it. Personal advisors are the first choice of information sources since their information can be addressed to our immediate concerns and circumstances and organized for our use. A friend or professional advisor will not give one a flood of irrelevant data but will pick out the items pertaining to our question. Other sources of information will be selected based on the liklihood of their providing useable information and the ease of use, using some complex internal decision formula called "information style." According to Wilson:

> (Information gathering systems) aim at relative satisfaction: they do not aim at completeness of information or the greatest possible amount of information, but at the smallest amount on which satisfactory decisions can be taken. This does not mean that one tries to avoid having more than the smallest adequate amount, but that one does not try to have a larger amount. (Wilson p 80)

Some hypotheses for this study are based on the above statements. The SMERC service is not a personal advisor, so it can be expected that clients will have tried using personal sources first before trying SMERC. They will also have tried other sources they consider more reliable or easier to use than SMERC. The questions that arrive at SMERC should be of importance to the clients since some effort is involved in requesting information from SMERC. Finally, clients will be satisfied with a limited set of documents rather than an exhaustive literature search, provided that they are able to make a decision or take some action that they had in mind. More specific statements of these hypotheses are found in the literature analysis.

The present study aims to characterize the use being made of SMERC. It is also, to some extent, an evaluation of

SMERC. The evaluation is not in terms of an abstract standard for information services but in terms of the satisfaction of the users. Analysis of what users say about their reactions to the service is intended to bring out key factors in user satisfaction. Although a study of this size could hardly be definitive in such an area, it could indicate key questions to be used in developing a user-oriented search service evaluation.

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II DESCRIPTION OF SMERC

Introduction

The San Mateo Educational Resources Center (SMERC) provides information services to educators. SMERC uses the Educational Resources Information Center (ERIC) data base, one of the longest-established bibliographic data bases, for computerized literature searching, as do many others, but SMERC is unique in its service orientation. A key feature is the "one-stop" nature of SMERC service. SMERC replies to an information request with a computer-produced bibliography plus a select collection of the actual documents listed in the printout which appear most likely to meet the client's needs. If these do not suffice, SMERC will provide copies of additional items requested by the client. Since not all client requests require an in-depth search, SMERC analysts compile resource guides listing and describing documents available for topics of high interest to educators. If a request exactly duplicates searches already done, it is answered from the subject-organized file of master searches. This unique facility covers some 1,000 topics. For each topic, it contains annotated search forms, copies of relevant journal title pages, and lists of references. These are used to put together a packet of materials for each duplicate request. Another file unique to SMERC is FIDO, its collection of documents related to California education in microfiche format. Additions to this file and computer searching of it were discontinued in 1980, but it is still accessible through manual indexes. A further unique aspect of SMERC is the physical distribution of its clients. From one office in Redwood City, California, SMERC serves clients in several California counties, the states of Arizona, Alaska, Florida, Hawaii, Montana, Nebraska, and Oregon, and the Virgin Islands.

History

SMERC began with an effort in 1965-66 to establish a regional education information information center in the San Francisco Bay area. A plan was submitted to gain federal funding for the program, but funding was denied. The San Mateo County Superintendent of Schools decided to start the program with local funds in his county and then make it available to other counties on a contract basis. Throughout its history, SMERC has been supported by a combination of county funds and contract revenues. From its start in 1967 to 1978, SMERC grew continually in the number of contracts served, in the number of searches performed, and in income. Since 1978 this activity has leveled or decreased slightly (Clay 1981).

Current Operations

At present SMERC serves thirty-seven contracts: seventeen California county offices of education, six California school districts, five state departments of education, four out-of-state consortia, two collegiate institutions, and three special projects/centers. The most common SMERC contract provides unlimited service with cost based on student enrollment figures of the schools served by the contracting agency. There are currently twenty-three such contracts that entitle the county or district to an unlimited number of searches and documents per year. Another eleven contracts are based on a forty dollar fee for each search with an additional ten dollar fee for each document order. The remaining SMERC contracts are designed to fit special circumstances and are not based on searching. New types of searching contracts are being developed. In general, SMERC service is not available to the public. Contracts with user agencies specify the authorized users--usually all educators employed by the agency.

The two collegiate institutions served by SMERC contract for a specialized service. Clients served at La Verne University are students in an external doctor of education program. At Saint Mary's College, clients are students in an external master of education program. Student requests are answered with printout bibliographies only. In both institutions, most students are practicing educators, so their questions may be related to their work as well as to their studies.

Most contracts for service outside of California have distinct characteristics. In Arizona, SMERC serves a consortium of school districts through a service center at Arizona State University in Tempe. One quarter of the clients served are university faculty and the rest are school personnel. In Nebraska, SMERC mainly serves urban districts participating in a federally-funded dissemination capacity building project, although other educators are eligible to use it. In Alaska, Florida, Montana, and Hawaii, all of the state's educators are served through the state department of education. In Oregon, clients come from several participating counties.

SMERC has a staff of seventeen people. The searching staff is divided into three search units called "pods." Each pod handles a particular set of contracts exclusively, becoming familiar with the people and circumstances of that district. Recently, in order to even the workload and decrease response time, a system for redistribution of excess searches has been instituted, but the pods retain primary responsibility for their assigned contracts. The decreased response times due to this change came after the survey conducted for this study.

The average number of searches handled by one SMERC researcher in a month is ninety. In the 1979-80 fiscal year, the staff completed nearly 11,000 searches, but they did not deal directly with that many clients. Outside of San Mateo County, requests are transmitted through linking agents provided by the contracting agencies and trained by SMERC. The linking agent's prime duties are to translate user information needs into search requests, to transmit these requests, to distribute the finished search packages, and to make potential users aware of the service. Most linking agents also have information-related duties within their own agency. The linking agent can be a single person serving an entire district or a network of people serving individual schools. Sometimes the linking agent is a field agent of the state department of education with a variety of duties designed to increase the dissemination of educational information. The linking agents are a key factor in the quality of service received by clients, and it is known that they vary in effectiveness. A SMERC study concluded that linking agents knowledgeable in the field of education and familiar with their clientele rate best on the clarity of searches submitted. Graduate degrees and library training were not related to increased effectiveness (Long).

Within San Mateo County, SMERC researchers perform the linking agent function. They are also responsible for incorporating use of the county's professional library into the response package.

Search Procedures

Requests arriving at SMERC by mail, telephone and telex are sorted according to the complexity of the problem presented. One group, composed of document orders generated by earlier searches or SMERC publications, goes directly to the reproduction unit. Topics known to be in the search file go to temporary researchers for immediate composition of a search package from items included in previous searches. The rest go to the pod serving the originating contract. If the question is unclear, an analyst will attempt to contact the client by telephone. Then the topic is checked against the files. If nothing appropriate is found, an interactive computer search of the ERIC files is performed. SMERC uses the Lockheed DIALOG search service on a fixed price basis. In the mid to late 1970's, SMERC used its own programs to search on local computers, but operation and maintenance of this system proved to be more costly than use of an outside service. The SMERC contract provides for daily delivery of printouts from Lockheed. When these are received, the researcher examines the printout and selects the documents most likely to be useful to the client. This judgment is based on the researcher's experience with the service and understanding of the question. The researcher will examine the documents as an aid in making this decision. Up to ten microfiche and up to twenty pages of photocopy are included in each search package. To support this duplication effort, SMERC has access to an extensive collection: 750 education-related journals, and the complete ERIC microfiche collection.

In most cases the client also receives the printout listing titles and abstracts of other items retrieved by the researcher's search strategy. In about twenty-five percent of searches run, the printout is not considered of sufficient quality to be sent to the client. The usual reason for this omission is poor precision in the printout--a few helpful items in a long list of uninteresting items. There are several possible reasons for this result including a lack of relevant material in the data base, inadequate indexing, and a poorly-defined search. If all relevant items are included in the search package, the client has no need for the printout and may find it confusing. Search packages are sent to the linking agent who distributes them to the original requestors and provides any help necessary to use of the package.

After the search package is completed, one copy of the search request form is retained in the SMERC file of master searches. In addition to the question, it now contains comments by the searcher and a list of documents included in the package. It may also include a copy of the search strategy used and a copy of a letter sent to the client. In such a letter, the researcher makes comments and suggestions, explains any inadequacies of the data base, and suggests further search possibilities. These completed search forms are filed by subject and are used in responding to later requests.

How Well Does the SMERC System Work?

SMERC procedures differ in several ways from accepted or preferred information service practices. One objective of this study is to see if these deviations from the norm do make a difference in client satisfaction. The geographic dispersion of the SMERC network puts distance and two or more intermediaries between the client and the data base. As mentioned before, the ability of the linking agent to negotiate the search question is crucial. Several studies cited in the literature review found that client satisfaction increased with direct participation in conducting their computer searches. SMERC linkers have to express the client's need well enough to make client participation unnecessary. In addition, the time required for transmittal of the question through several hands plus the shipping time required for return of the search package make it inevitable that the client will wait a significant amount of time even if the request is processed quickly by SMERC. A third possible source of dissatisfaction is the researcher's choice of documents. The literature of relevance judgments raises doubts about the ability of a second person to make such judgments for a client (Cuadra). An additional factor, common to all bibliographic search processes, is the high likelihood of pertinent documents being missed. The basic premise of a SMERC-type system is that most clients are satisfied by a few good documents on their topic. The interview portion of this study was designed to determine if this is true of SMERC clients.

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III LITERATURE REVIEW

Use of Online Bibliographic Services

Although the use of automated reference retrieval services has been growing for the last ten years, user data is rarely published. According to Pauline Atherton:

> Nobody seems to know just how many active users of online services there are. Moreover, surprisingly little information has been published about the individuals who have patronized these services or the uses to which they have put the results. (Atherton p 12)

Atherton quotes an estimate by Martha Williams that the heaviest users among libraries are industrial, government, and academic in that order. This is not disputed by the Wanger study that found that 472 responding managers of online services came from the following types of organizations:

commercial	32%
educational	31%
government	21%
other	16% (Wanger).

The educational group for this study included public school districts as well as colleges and universities, and this should account for the difference in order. The high position of commercial organizations in these orders suggests that there is a great unknown factor in information service use. For reasons of security and commercial interests, user data from such organizations is not apt to be published.

Two recent studies fill in some of this gap with user studies of online services in semi-industrial settings. One was done among users in laboratories related to the National Aeronautics and Space Administration (NASA) Industrial Application Center at the University of Southern California (Jensen). Of one hundred and sixty users surveyed, seventy-one came from private industry and eighty-nine from a NASA-Small Business Administration Technology Assistance Program. Telephone interviews conducted in 1977 and 1978 explored the dollar benefits of using NASA's search service and the costs in terms of user effort as well as dollar expenditure. With some coaching by the interviewers, clients estimated the value of searches six to eighteen months after the results were received. The range of benefits is not reported. Over fifty-three percent of those interviewed reported some benefit. The ratio of dollar benefit to dollar invested averaged 2.9 to 1. The authors note that searches showing the greatest benefit were those focused on a specific problem. This reflects the natural result that clients were more apt to place a dollar benefit on the answer to a particular question as opposed to general responses to general questions. At one location, searches were conducted with the client present. These turned out to be more cost-effective in terms of user perception of their value even though they were also more expensive to conduct, presumably because of longer connect times due to conversations with the client. The survey results are subjective even though given in terms of dollars. An example of this is the variation in values place on searches with negative results. Some clients placed zero or negative values on these while others saw them as a time-saving signal to change direction. Elements of individual psychology as well as variations in setting seem to play a part in the reactions. Unfortunately, the users in this study are not categorized by occupation or field, nor are their purposes reported.

The second study to report data from an industrial setting is remarkable for the thorough treatment it gives to a number of questions concerning online search services. This study, reported by Johoda and Bayer in 1979, investigated the effect of the introduction of online information services in the Chemistry Department of Florida State University and a facility of Monsanto Textiles Company. The quasi-experimental design of this study included a pre-introduction survey of 332 potential users, records of actual use of various versions of the service, and surveys of users and non-users to identify changes in attitudes or habits brought about by presence of the service. Some general conclusions about who was using the service were reached. In both industrial and academic settings, those with a doctoral degree were more likely to use the service than those without. Academics currently completing their Ph.D. were even more likely to use the service; senior scientists, faculty, and supervisory personnel were less likely to use it. Only weak relationships were found between prior information-seeking style and attitudes to information and subsequent usage of the search service. No differences in information style were detected between users and non-users of the service. As in the NASA study, user participation in the search (in this case users conducting their own terminal sessions with instruction from a staff member) yielded searches that were more costly but more satisfactory to the client. Few differences were found between scientists in academic and industrial settings in this study.

The most complete use figures for a purely academic setting come from the experience of the Massachusetts Institute of Technology with the Northeast Academic Science Information Center (NASIC) service. The final report for this project for March 1974 through February 1975 gives detailed data on 316 searches:

MIT faculty	18%
MIT graduate students	28%
MIT undergraduates	6%
MIT staff	10%
industrial/commercial	31% (Benenfeld).

In this case, the searches were all done in one place, but some were done for outside organizations. The positions of these outsiders are not reported. Purposes for using NASIC were not investigated, but some indication can be derived from comparison of data base used with user's department. A large "cross fertilization of interests" is reported (Benenfeld p 5-3). Scientists used social science data bases and vice versa, leading to the guess that the service was often used to check out some subject outside of one's immediate area of specialization. The median number of data bases of interest to a department was 3.5, and this was at a time when the number of data bases available was relatively small with few duplications of subject. Of ninety-two users responding to a mail survey, ninety-one percent found the service satisfactory. Another group of eighty-four percent found the citations provided relevant to their questions. Such positive reactions are common in follow-up surveys of search service users.

From December 1975 to June 1976, the University of California at San Diego experimented with providing free searches to the entire university community. The 1166 searches for this period were done for the following users:

graduate students	26%	
undergraduates	14%	
academic staff	26%	
faculty	20%	
other staff	14%	(Maina).

The high number for academic staff is accounted for by the large size of the research staff at UCSD. Those conducting the San Diego experiment were especially interested in use by undergraduates. They concluded that undergraduates would use a search service more if it weren't for the barrier of cost. The nature of the questions asked indicate that San Diego undergraduates have sophisticated information needs and may be involved in research with faculty or on their own.

In another attempt to eliminate the cost barrier for students, the University of Delaware experimented with subsidizing the searches of undergraduates and graduate students without grants. For one year the library provided searches to these students at half cost. The total usage that resulted was as follows:

graduate students	47%	
undergraduates	26%	
faculty & staff	20%	
non-university	8%	(Kobelski).

The relatively high student figures do seem to support the contention that the financial obstacle is a major one, for graduate students as well as undergraduates.

Differences in student and faculty reactions to a search service were investigated in a recent study of users of the MEDLINE system sponsored by the National Library of Medicine. Data from fifty-four search evaluation forms and eighteen interviews revealed no significant difference between students and faculty in their assessments of search value and relevance, satisfaction with proportion of relevant citations retrieved, or perceptions of the pre-search interview. Users who participated in the performance of their search tended to assign higher relevance scores to the results (Hitchingham).

Another MEDLINE study gathered detailed data from over one thousand users through a multiple choice questionnaire attached to the search request form. This approach allowed collection of a large body of data about the users and their purposes for searching but nothing about the actual use made of the search product. Users in this study were fifty percent students, forty percent faculty, and ten percent medical practitioners. The stated purpose was research for about fifty percent of all requests. Patient care was the purpose in only fourteen percent of the requests (Tagliacozzo).

Search services in a public library setting are unusual. One experimental project, funded by the National Science Foundation, provided funds for offering service in four California public libraries. The searches were free for the first year, subsidized for the second year, and provided at cost for the third year. Although the entire community was free to use the service, most of the searches done each year were done for individuals from nearby schools and colleges:

	year 1	year 2	year 3
graduate students	14%	18%	24%
educators	13%	17%	28%
technical professionals	15%	12%	9%
business professionals	4%	5%	8%
undergraduate students	13%	9%	5%
counselor/therapist	1%	2%	4%
professionals	5%	6%	3%
scientist or researcher	5%	3%	1%
librarian	7%	8%	5%
skilled laborer	2%	0	1%
small business owner	2%	0	0
social worker	1%	2%	1%
other	8%	6%	5%
no response	11%	11%	6%
total	101%	99%	100%
searches			326

(Mick).

One's job classification does not necessarily indicate the reason for requesting a search. Additional data from the final year indicate that some fifty-nine percent of the searches were connected to the user's educational activities, while only twenty-five percent were job-related (Mick p 13). The figures suggest that scientists are not heavy users of automated bibliographic service, but it is more likely that most scientists in the area have a better source of such service than the public library. Because the public libraries involved in this experiment were afraid of increasing their search load beyond their staff resources, they did not promote the search service in the final year. Requests came from a limited number of people who were already library users or were aware of the service. In spite of this and the increase in fees, the service was used more in the third year than in the second year.

Looking at the above studies, one can conclude that Atherton's statement still holds; little is known about the use being made of online literature search services. In the academic setting, the heaviest users are graduate students and the most popular purpose is research. For commercial and government settings, no generalization can be made. In all settings, data on user reactions tend to come from small surveys using multiple-choice questionnaires. The NASA survey and, to some extent, the Jahoda and Bayer study, are notable exceptions. There is room for a number of additional approaches to finding out what users are doing with the material they receive and how satisfied they are with the service.

Information Flow in the Social Sciences and Education

Because SMERC service is directed to educational practitioners, studies of information flow in the social sciences and in education are relevant to the investigation of SMERC. There are studies dealing with needs, uses, and evaluations of systems both manual and automated.

Paisley's 1965 review of user studies in the social sciences concluded that there was little of significance to review. Brittain's 1970 review concludes that there are still few, and that those that exist are weak in methodology. He finds confirmation of the importance of informal communication networks in the social sciences. He also notes that "very little is known about the uses that a researcher makes of information once he obtains it..." (Brittain p 148). He reviews the extensive studies of information flow within the American Psychological Association and notes that improvements in information flow were brought about based on the findings of these studies. Changes in the society's publication program were able to speed up the interchange of new findings. Although the American Psychological Association information system was vast, most users employed only a few of its services.

There is just one general study of information use in the social sciences. The objectives of the Investigation Into Information Requirements of the Social Sciences (INFROSS) were comparison of results with those for science and design of specialized information systems. Questionnaires, interviews, and observations were used on a sample of all social scientists in Great Britain. The authors conclude that there are three major reasons for a social scientist to fail in filling his information needs: 1) lack of time or motivation; 2) difficulty in retrieval ; and 3) ignorance of the existence of information. These are not particularly different from the reasons for failure in other disciplines. The major difference in the social sciences is that failure occurs more often because there is less penalty for ignorance (Line p 202). Another conclusion is that many social scientists would be willing to delegate their literature searching. Some eighty-eight percent of those questioned would be willing to delegate at least some of their searching. This may reflect the strength of the difficulties listed above. It indicates a willingness to use information services that feature intermediaries.

One small, exploratory segment of the INFROSS study concentrated on education. Thirty College of Education lecturers were interviewed in groups. Although those who were active in research had information use patterns like those of researchers in the main INFROSS study, those who gave all their time to teaching were isolated from information sources. Even their informal contacts were minimal. Twenty-four school teachers were interviewed also. They were found to be users of popular and informal literature sources, but they did not use the literature of education or educational research, nor did they see any need to use it.

Countering similar attitudes in the United States was the goal of several government programs designed to increase the impact of educational research by diffusion of new programs. One such project, the Pilot State Dissemination Program, was evaluated by Sieber et al. in a prime example of a change-oriented evaluation of an educational information system. The program provided field agents, outsiders with information-related duties more sweeping than those of SMERC linkers. These people were asked to identify information needs, to formulate and transmit requests for literature searches, and then to assist in interpretation and implementation of the results. The evaluation concludes:

> According to our survey and interviews with clients, the extension agents whom we shadowed for a period of almost two years (backed up by their retrieval teammates and project directors located in the SEAs*) succeeded in producing concrete reforms in administrative and classroom practices in rural and urban areas which, for the most part, were operating substantially below the standards of modern educational practice. (Sieber p 10)

This is a strong result for an information program. However, the percentage of cases for which implementation of a specific practice or program could be documented was low. A questionnaire survey finding that clients valued the assistance they received more than the information transmitted opens the question of whether a Hawthorne effect enhanced the results. On the other hand, a different view of what can be expected from an information program could shift the results in the positive direction. The instruments used in the Sieber evaluation placed highest value on the implementation of new programs. If the information was used to other ends, the transaction was considered of little value. Items coded as no specific use included one case where a decision was made and other cases where material was added to a file or served as a topic of discussion.

Another aspect of the use of educational information was the subject of an experiment by Asher and Vockell in 1973. They evaluated the quality of documents in the Educational Resources Information Center (ERIC) data base. A randomly-selected set of research-oriented documents from the ERIC data base were evaluated by a group of educational research specialists and a group of educational decision makers. The researchers rated the quality of the documents as low overall although some documents were rated very good. The decision makers rated all the documents highly and expressed willingness to accept their findings. The researchers concluded that practitioners would unwittingly accept poor documents from the data base. It is also possible, however, that the decision-makers were indeed better judges of what would be useful to them than the researchers.

In the mid 1970's computer searching of the ERIC data base became widely available, and some aspects of its use were evaluated. The Massachussetts State Department of Education initiated a search service in 1974 and surveyed all clients using the service that year. Some 200 of the 300 clients receiving an in-depth search completed a questionnaire. The great majority of these clients turned out to be school administrators fitting a pattern. They held master's degrees, were engaged in program planning or decision making, regularly read journals, did literature searches related to their work, and passed information on to others. They seem to fit the profile of the information gatekeeper developed by students of scientific information flow, but some of this pattern may have been created by the format of the questionnaire. The low number of teacher requests led the evaluators to conclude that "many educators lack the time, competency, and motivation to conduct a literature search in order to deal with practical problems" (Mass. p 40).

Another major study covered activity in New York in 1975. Computerized record keeping allowed considerable analysis of New York State Educational Programs and Studies Information Service (EPSIS) user data. Analysis of 1888 ERIC searches conducted during the period September 1975 to April 1976 yielded the following user profile:

classroom teachers	22%	
administrators K-12	22%	
state education agency	17%	
college students	14%	
college faculty	7%	
ancilliary staff	5%	
BOCES* staff	5%	
others	8%	(Wilkes).

Administrator use was high relative to their proportion of the population eligible to use the service but low relative to the Massachussetts record. However, administrative concerns far outnumber classroom-related questions in data gathered on purpose of search:

administrative planning	22%
college course work	22%
program development	17%
curriculum development	14%
classroom instruction	9%
personal/professional studies	6%
other	10% (Wilkes).

Later studies moved away from actual use to consideration of general patterns of use or responses to hypothetical situations. The Education Information Market Study by Hood and Blackwell tried to identify patterns of information use for different types of educators. They conducted extensive interviews with 137 "key" people and surveyed over 1300 people with education-related jobs. They found some job-related patterns of information use, but they also found that:

> there are distinct patterns of information use that characterize people and that the people who tend to use similar patterns are only sometimes in the same types of jobs or positions. (Hood and Blackwell p I-5)

If information style is mainly an individual rather than an occupational characteristic, it is not of much help in designing or evaluating specialized information services.

Another investigation of information style was conducted by Matheson in British Columbia. The intent was to further the characterization of information style by developing an attitude-to-information scale. One section of a questionnaire sent to a random sample of educators asked for fifteen attitude statements to be rated from "very like me" to "very unlike me." Over 1000 responses were received. There was a high teacher participation:

teachers	50%
support personnel	33%
administrators	16% (Matheson).

General questions revealed that few educators in rural British Columbia felt that they were seriously cut off from information sources. Lack of time was their greatest problem in securing information. The INFROSS findings, although dealing with a different group, are confirmed by this and by the low score of teachers on the attitude-to-information scale. Some thirty percent of teachers scored in the lowest segment of the attitude scale, even though this study differed from INFROSS by including information about the subject taught as well as information about education among the sources counted. The attitude scale was positively related to increasing experience and responsibility: "As years of experience increase, the percentage of respondents with strongly positive attitudes to information also increases" (Matheson p 83). The relationship between years of education and attitude to information was also positive. Matheson outlines a complex pattern of information use for different position groups within the population studied based on hypothetical questions included in the study questionnaire. If these patterns could by confirmed by studies of actual use, they would be more interesting.

Literature Analysis

Several themes that appear in the literature reviewed are important to the present study. Some raise general questions that this study hopes to answer. Others make specific points about information use in education that can be expected to hold for SMERC.

Data on who is using literature search services come mainly from general studies and those in academic situations. The general finding is that searches are done most often for beginning researchers. Graduate students lead the list in all surveys of academic sites. This was found at Florida State University, at NASIC, at the University of California at San Diego, and at the University of Delaware. This generalization should not hold for SMERC because the group of authorized users is different. In educational centers, highest usage by administrators is reported. Earlier data-gathering efforts indicate that this should be the case at SMERC as well.

Another theme found in the literature is the complex nature of information needs and the consequent difficulty of predicting how an information service will be used. One indication of this is the crossing of subject field boundaries noted at MIT. Another indication is Hood's conclusion about the individual nature of information use. The Jahoda and Matheson investigations of information style found no ready predictors of patterns of use. Matheson's patterns are complex and distinct for the various sub-groups of educational practitioners studied. Jahoda and Bayer could find no difference in the information styles of users and non-users among chemists.

The complexity of the process leads to complexity in user evaluations of results. The individual nature of reactions in the NASA study illustrates this. The Sieber report points out that client reactions are influenced by the nature of their relations with the providers of information, assistance being more welcome than information. Researchers who participate in their searches tend to value the results more highly according to Atherton's review and the NASA and Jahoda and Bayer studies. The generalization that practitioners value help while researchers value direct contact with the literature can be tested for practitioners at SMERC.

Other trends in the literature have special relevance to a study of SMERC. A 1979 work by Paul Hood contains a useful summary of the results of studies of information use by educational practitioners. Among his observations are the following: 1) Educators play a large number of roles and assume a number of positions; 2) Most practitioners require relatively small amounts of information from a large and highly diverse body of information; 3) The sources used most often are local resources including colleagues and textbooks with other formal sources coming after these; 4) There is little information on actual uses and benefits; 5) Information, once gathered, is often passed on to others; and 6) The cycle of use corresponds to the school calendar (Hood 1979 appendix E). Another point made by Hood and others is that educators lack time and motivation for doing literature searches. This conclusion of the INFROSS educator study was confirmed by the Wilkes study and the Matheson study. Some of these generalizations form part of the reasoning behind the design of the SMERC service. SMERC provides relatively small amounts of information. SMERC is service-oriented in order to save clients time whatever role they are playing. The present study is designed to test the effectiveness of these strategies. It also intends to supply needed data on actual uses and benefits.

Study Goals

As stated in the introduction this study has goals relating to practice and to evaluation theory. SMERC is to be evaluated in terms of user satisfaction. The major goals of the study are to characterize the types of requests answered by SMERC and to determine what clients do with the answers they receive. Relating these goals to the literature surveyed and to the Wilson theory of personal information seeking described in chapter one, leads to several specific expectations about user behavior and attitudes.

These are listed below in the form of hypotheses. Each is first stated in a general form then expanded. The hypotheses mentioned in the introduction are included here.

1) SMERC use forms part of a larger information gathering and dissemination process.

Clients are expected to have looked elsewhere before coming to SMERC. Most will have used personal information collections and personal advisors before consulting a SMERC linking agent. They will also have consulted other sources that they see as being more accessible than SMERC. There may not be a pattern to these consultations. The variations in information style reported in the literature are so great that consistency should not be expected from SMERC users. One factor, however, is expected to be consistent. Although there usually is no charge for an individual search from SMERC, the effort associated with submitting a search places some "cost" on the search. Clients will evaluate this expenditure of energy before attempting to use SMERC. Thus, even though the service is free, a request will need to be important in order for a client to submit it.

After receiving material from SMERC, clients will continue their information-gathering process in various ways, suited to their individual styles. Responses expected range from filing all the material without reading it to reading everything and continuing to follow up references in an ever-increasing search. It is expected that most will share or disseminate the information in some way.

2) Clients seek relatively small amounts of useful information rather than comprehensive or authoritative information.

For practitioners using an information service, usefulness will be more important than authority. If the items received are too long or complex to be used in a minimum amount of time, their excellence will not impress most clients. Similarly, the client does not want to see too many documents. Therefore, the limited number of documents provided to clients by SMERC should be adequate, especially if the information therein facilitated decision-making or progress on a project.

3) SMERC clients are administrators or teachers playing administrative roles.

The literature suggests that among educators administrative tasks are given greater weight and are more apt to lead to a literature search. Also, administrators may be more used to employing services or may be closer to the centers that handle SMERC requests.

4) High levels of satisfaction are expected from most SMERC clients except from those who are professional researchers.

Most users of information services, if asked for a reaction will respond positively. This is true of the NASA study and the MIT study. Since the SMERC service gives the client a more complete package than the services involved in those evaluations, a more positive response can be expected. On the other hand, because SMERC response is selective rather than comprehensive, it should be less satisfactory to a professional researcher.

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IV Methodology

Content Analysis

In order to answer some questions about SMERC use and to aid in the design of the interview survey, it was necessary to analyze a sample of SMERC transactions. To get a sizable sample, all search transactions completed in April 1980 were studied. April was judged to be a fairly representative month by the SMERC staff, since there is nothing in the schools' calendar to make April transactions unusual. All transactions that resulted in a search package or a printout were included. Other transactions including document orders and requests for SMERC publications were omitted.

Request forms for all items in the sample were copied as the searches were completed. They were collected in a roughly chronological order and then given sequential numbers. Of the 996 items numbered, six turned out to be duplicates produced by copying errors. Thus, the actual sample included 990 forms.

Analysis was done solely by the investigator. Results were recorded on coding sheets then transferred to punched cards for data processing. All analysis was based on the front side of the completed search forms. Notes added by the searcher to the back of the form and letters written to accompany the search package were not copied. These notes usually relate to the outcome of the search rather than to the aspects of the search being studied in the content analysis.

The first category of analysis was position of requestor. Since this information is not required by SMERC, not all search requests include it. Most linking agents use a form that has a space to record client position, but not all fill in that information. Position information was recorded only if it was given, could be inferred from the requestor's title, or was clearly indicated in the request (ie. "Third grade teacher wants information on rabbit hutches in the classroom.") It was not possible to assume the requestor's position from the name of the contracting agency. Generally, contracts with state offices of education or school districts allow service to any educator in the jurisdiction. Technically, most users from La Verne University and St. Mary's College are students, but faculty also use the service. Moreover, since the programs served at these institutions are external degree programs yielding advanced degrees, most of the students are employed is some aspect of education.

The second category of analysis was contracting agency. This indicates the state, county, or school district that paid for the search. It also indicates the geographic origin of the search.

The third category was search type. SMERC divides all searches into four categories: S for a standard search resulting in a standard search package; SR for searches copied from the file of already-completed searches; PO for a request receiving a printout only; and M for the searches that do not fit into the preceding categories. The type is assigned at the beginning of the search process and marked on the search form.

Content analysis was required for the fourth category, subject of search. Each search request was assigned a subject grouping that seemed to represent the most important subject of the request. This was done using the Thesaurus of ERIC Descriptors descriptor group section. A descriptor was selected to represent the subject of the request as it was expressed on the request form. Then the request was assigned to the descriptor group containing that descriptor. There are forty-one of these groups that form a topical division of the ERIC descriptors. (See appended list.) As an aid in this subject analysis, the subject heading assigned to the request by the search analyst was considered. SMERC uses its own set of some 1000 subject headings to organized its file of completed searches. Some of the SMERC headings are ERIC descriptors and some are not; many are more specific than descriptors. These headings represent the searcher's prediction of how the search would be most useful in answering later requests, rather than the chief subject of the search. Therefore, the heading used for this study did not always agree with the SMERC heading.

The final category of analysis was type of material requested. The classification for this effort was devised to distinguish the different expectations expressed by clients (through their linking agents). The first hundred items in the sample were used as a teaching sample in devising the categories. The following categories resulted: 1) subject matter information; 2) curriculum materials and guides, classroom activities and programs; 3) studies, research reports; 4) models (not curriculum), techniques, examples; 5) policies and guidelines; and 6) other specific requests. These categories reflect the ways requests are phrased. A large number simply ask for information on some topic:

> I would like information on using volunteers with special education students.
>
> Would like information regarding the modification of prosodic features in the language of mentally retarded adults.
>
> I would like to have some historical background concerning the German army of World War II.
>
> Info on Henry Barnard--first commissioner of education; ...

Some of these requests are about education, and others are about subjects of instruction. Another large group of requests ask for "research" on a topic, meaning that they want a computer search of the topic from SMERC. These were placed in category one. Category three was reserved for those requesting research reports or data resulting from research:

> Requesting research done on High School programs based on variable credit classes.
>
> She wants to see research/information on what is the impact of violence on television on children.

Category two was used for questions concerning school curricula:

> He wants curriculum guides/activities for teaching creative writing.
>
> Ideas, teaching units, activities on constellations, astronomy, space travel, etc. for gifted eighth grade ability.

Category four was used for "how to" requests of an administrative character and for all technique questions:

> Examples of the RIF "Reduction in Force" policies for unified districts with declining enrollments.
>
> What are counseling techniques that work in high school?

Category five was reserved for requests for actual policies or guidelines. Category six was used for requests for specific formats not included in the above categories:

> Sources of project money in the area of nutritional education.
>
> He would like a listing of high interest-low vocabulary books for grades 6, 7, 8.

As the analysis proceeded, category five turned out to be very small, so it was combined with category six in the final results.

After the categories were devised and coded for all 990 requests in the sample, the results were tallied. A number of cross-tabulations were run using SPSS version H, a standard statistical program.

Interview Survey

The results of the content analysis were used in designing the interview survey. Because patterns of use in other states are different, it was decided to restrict the interviews to California counties and school districts. The colleges were omitted because of potential difficulties in reaching clients and because their requests presumably are related to academic work and may be different in character from the rest of the California requests. In the April 1980 searches, 414 came from California excluding the colleges. This was used as the expected number of California searches for the sample period.

The period selected was between September 15, 1980 and October 14, 1980. There were several reasons. Since SMERC advertises a turn-around time of two weeks, searches finished on or after September 15 should have originated during the school year and not during the summer recess. October 14 was selected as the closing date so that most of the interviews could be completed before the Christmas holidays. All interviews were to be completed more than thirty days and less than ninety days after completion of the search. It was desirable that the client should have had some time to make use of the materials, but the event needed to be relatively fresh in the client's memory. This plan was followed, and most of the interviews were completed during the month of November.

The sample was drawn from SMERC search log sheets. These are compiled from the search forms as each search is completed. Their arrangement is chronological by date of completion. A separate log sheet is made for each contracting agency, and the sheets are kept in alphabetical order. A systematic sampling of the log sheets was taken. Assuming that more than 400 searches would originate in California in the one-month period, in order to draw a sample of more than 100, it was decided to take every fourth California search. Starting with the first California contract in the alphabetical ordering and using a random start, every fourth California search was chosen. On each log sheet, counting started with the first search completed after September 14, 1980 and stopped with the last search completed before October 15. Counting was continued from one log sheet to the next as if all searches for the desired period were on one continuous list. A list of ninety-five searches resulted from this sampling. Subject headings listed on the log sheets were then used to retrieve the search forms for these searches. Because a client could only be interviewed once, duplicate names were eliminated, leaving eighty-six clients for the interview sample.

It is not easy to contact public school personnel by telephone, so it was necessary to contact the clients first by mail. Using the search forms and the _California School Directory_, titles and addresses were collected for the clients in the sample. A letter and reply card (appended) were sent to each client. They were urged to cooperate in the study and to send their instructions for reaching them by telephone for an interview. The letter was signed by the SMERC director in order to show that the study was done with SMERC's approval and to increase participation. (See appendix B) Fifty-seven reply cards were received, making a return rate of sixty-six percent. Of the fifty-seven, three declined to be interviewed and six were not reached by the deadline set for interviewing. Interviews were completed with the remaining forty-eight, fifty-six percent of the original sample.

To see if those interviewed were representative of the drawn sample, the request forms of those chosen but not interviewed were examined. The thirty-eight clients not interviewed compare with those interviewed as follows:

	not interviewed	interviewed
teacher	58%	29%
administrator	24%	42%
other	13%	27%
unknown	5%	2%
total	100%	100%
n =	38	48.

A large number of those who did not reply were teachers from Kern County. The sampling period happened to coincide with the processing of a large number of requests generated by a SMERC-related teacher inservice session in Kern County. Those attending were urged to submit a search to try out the system. It is safe to assume that many of these requests were artificially stimulated and would not have yielded particularly representative interviews. Ignoring the Kern County requests leaves a group of requests that generally fit the pattern of those interviewed. The group contains equal numbers of teachers and administrators and is spread all over California.

Interviews were conducted by telephone. Most were done during business hours using telephones in the SMERC office. The interviews took from fifteen to thirty minutes. Most subjects were cooperative and interested in discussing their information request.

The interview protocol was developed at the beginning of the study. Questions were refined using a series of interviews with SMERC clients in the Santa Clara County Office of Education. The location was chosen because it was possible for the investigator to conduct in-person interviews in that office. Requests were selected from a period in January 1980. Nine preliminary interviews were conducted, four in person and five by telephone. Because there was little difference in the quality of the results using the two methods, and because telephone interviews are considerably cheaper and easier to arrange, it was decided to do all interviews by telephone. This was done consistently even though a few clients in the sample worked in the same county office building occupied by SMERC.

The interviews all followed the printed protocol (appended). For some questions categories of responses were to be checked. For others a narrative response was expected. Most of the questions were successful, but a few did not work as expected. For example, it proved impossible to start the interview with a general question about the client's information-gathering habits. Once the purpose of the interview and the request in question had been identified, clients were eager to give details of that particular request. Even when asked a more general question, they tended to reply with specifics. Additional difficulties with the questions are pointed out in the interview results.

V ANALYSIS OF SEARCH REQUESTS

All searches completed by SMERC in April of 1980 were used for the content analysis of search requests. There were 990 completed searches in this selection. In the experience of SMERC personnel, the month of April is generally representative of the SMERC workload. The first question that analysis of one month's requests can answer is, "Who is using the SMERC service?" Since all requests are marked as to the county or district of origin, this information is clear. The breakdown of requests by contract is as follows:

table V 1: Search Requests by Contract

contract	percent
Arizona	19
Oregon	12
San Mateo County, CA	11
Virgin Islands	9
Florida	8
Riverside County, CA	7
Orange County, CA	6
Alaska	4
Kern County, CA	4
Santa Barbara County, CA	3
Nebraska	3
Santa Clara County, CA	2
St. Mary's College, CA	2
Other California districts	2
La Verne University, CA	1
Tulare County, CA	1
Alameda County, CA	1
El Dorado County, CA	1
Placer County, CA	1
Glenn County, CA	1
Hawaii	less than 1
Humboldt County, CA	less than 1
Lassen County, CA	less than 1
Merced County, CA	less than 1
Tuolumne County, CA	less than 1
total	100 (990 requests).

Including the collegiate institutions, forty-four percent of SMERC usage comes from within California. The highest California usage is from SMERC's home county, San Mateo County, California.

Positions of Requestors

The available data indicate that, in general, SMERC use is higher by administrators than by teachers. The position of the requestor was stated or implied on 488 of the request forms. All tabulations involving position of requestor were limited to this set of 488 requests. Although teachers outnumber administrators as potential clients, administrators form forty-six percent of those for whom position is known. Another twelve percent is made up of those performing auxiliary services such as librarians, counselors, psychologists, and speech specialists, leaving forty-one percent to teachers.

It is interesting to see that this pattern does not hold for all areas served by SMERC. In the Virgin Islands, in Oregon, and in the combined states with low use rates, teacher requests are more numerous than administrator requests. This suggests that there are differences in the way the service is used in different locations. Investigation into local practices explains some of this result. The Virgin Islands are served by just two linking agents. One is a very active agent who likes to serve teachers and encourages their business. There may be similar factors at work in other states.

table V-2: Position of Requestor by Location

	administrator	teacher	other	total	requests
Arizona	85%	0	15%	100%	52
California	53%	37%	10%	100%	215
Oregon	38%	48%	13%	99%	92
Virgin Islands	23%	69%	8%	100%	91
Other locations	25%	34%	41%	100%	32

The percentage of requests for which positions are known varies by state. It is 100% for the Virgin Islands and nearly that in Oregon. In California, position is known for only half of the requests, and in Arizona, it is known for less than one third of the requests. SMERC staff experience with Arizona suggests that most of the unidentified requests come from teachers. If this is true, then administrator requests outnumber teacher requests only in California.

Types of Material Requested

Analysis also focused on the type of material requested. The classification developed for this purpose includes six types of material: 1) subject matter information; 2) curriculum materials; 3) research reports; 4) models and information on techniques; 5) policies and procedures; and 6) all others. This division worked well in that most requests were worded so as to fall clearly into one or another of the categories. Category one was used for requests for "information about" some subject whether the subject was within the subject field education or was itself a subject of instruction. This was the largest category. Further subdivision of these requests might have been useful. Categories five and six were very small and are combined in the following table. Cross tabulation of type of material requested with position of requestor shows a pattern that seems to validate the categories used. Administrator requests were highest in the subject matter category and next highest in the models and techniques category. The bulk of teacher requests are equally divided between the subject matter and curriculum categories.

table V3:

Type of Material Requested by Position of Requestor
(based on table 4 appendix G)

	administrator	teacher	other
1. information	41%	38%	53%
2. curriculum	17%	38%	23%
3. research	13%	13%	3%
4. models	22%	6%	16%
5&6. others	7%	5%	5%
total	100%	100%	100%
requests	226	200	61

It can be seen that SMERC clients are not much interested in research. They prefer more informative or action-oriented forms of informative.

Subjects Requested

The major area of content analysis was subjects requested. Subjects were determined by reading the question and by consulting the subject heading assigned to the search by the SMERC researcher. The subject classification scheme used was that of the ERIC thesaurus descriptor groups. A list of the groups with percent of requests follows. These groups were used for a variety of cross tabulations, but because of the small cell sizes, the results could not be considered significant. The cross tabulations were recalculated for the larger classification groups represented by the roman numerals.

Requests appeared in all but two of the subject categories. For the entire sample, there were only a few individual groups that showed any popularity. Topics drawing more than five percent of total requests were: IIB, disabilities; IIIA, the educational process in the classroom; IIIB, the educational process in the school; and IVA, subjects of instruction. These reflect a high interest in dealing with disabilities and predictable interest in how to run a classroom and how to run a school. The popularity of IVA may be due to the fact that it is a large category containing all subjects that couldn't easily be categorized, from alphabetizing skills to shop curriculum.

table V4: Descriptor Groups with Percent of Requests

(n=990 *=most popular topics)

- I Learning and development 7.3
  - IA Learning and perception 3.2
  - IB Individual development and characteristics 4.1
- II Physical and mental conditions 14.8
  - IIA Health and safety 2.7
  - *IIB Disabilities 8.3
  - IIC Mental Health 2.4
  - IID Counseling 1.4
- III Educational processes and structures 26.0
  - *IIIA Educational process: classroom perspectives 6.3
  - *IIIB Educational process: school perspectives 8.9
  - IIIC Educational process: societal perspectives 4.4
  - IIID Educational levels, degrees, organizations 3.5
  - IIIE Curriculum organization 1.0
  - IIIF Students, teachers, school personnel 1.9
- IV Curriculum areas 31.8
  - *IVA Subjects of instruction 10.5
  - IVB Agriculture and natural resources .9
  - IVC Arts 4.0
  - IVD Humanities 2.4
  - IVE Languages 1.2
  - IVF Language and speech 1.2
  - IVG Reading 3.9
  - IVH Physical education and recreation 2.7
  - IVI Mathematics 1.7
  - IVJ Science and technology 3.3
- V Human society 5.0
  - VA The individual in social context 1.5
  - VB Social processes and structures 1.4
  - VC Social problems .4
  - VD Bias and equity .6
  - VE Human geography 0
  - VF Peoples and cultures 1.1
- VI Social/economic enterprise 5.1
  - VIA Government and politics 2.1
  - VIB Economics and finance .6
  - VIC Labor and employment 2.2
  - VID Occupations 0
  - VIE Business, commerce and industry .2
- VII Information and communications 3.1
  - VIIA Information/communications systems 1.2
  - VIIB Communications media 1.8
  - VIIC Publication/document types .1
- VIII Research and measurement 3.5
  - VIIIA Research and theory .6
  - VIIIB Measurement .6
  - VIIIC Tests and scales 2.3
- IX Facilities and equipment 2.7
  - IXA Equipment 1.5
  - IXB Facilities 1.2

Of the larger (roman numeral) groups, the most popular were IV, subjects of instruction; III, educational processes and structures; and II, physical and mental conditions. Requests by administrators were in areas of school level and district level administration, subjects of instruction, and disabilities. Teacher requests were most numerous in the areas of classroom administration, subjects of instruction, and disabilities.

In a few subject areas, differences between administrators and teachers were apparent. Administrators were more interested in category IIIB than teachers. This category deals with building-level administration and should be of more interest to administrators. Administrators also show higher interest in category IIIC, the educational process: societal perspectives. This could represent greater responsiveness to social pressures among administrators. On the other hand, seven and one-half percent of teacher requests lie in category VIE, humanitites, but no administrator requests were classified there. A similar percentage of the administrator requests were classified in the area of economics and finance (IVB) while no teacher requests were found there. These differences do seem to reflect differences in interest, but the numbers are so small that their significance is doubtful. (See appendix G table 1.) In general, the requests of teachers and administrators are similarly distributed.

The same subjects continued to be the most popular when requests from individual states were examined. Additional popular topics were VIA, government and politics, in Oregon and VIB, economics and finance, in Arizona. Overall, the preponderance of classroom-related questions indicates that SMERC is being used for work-related questions.

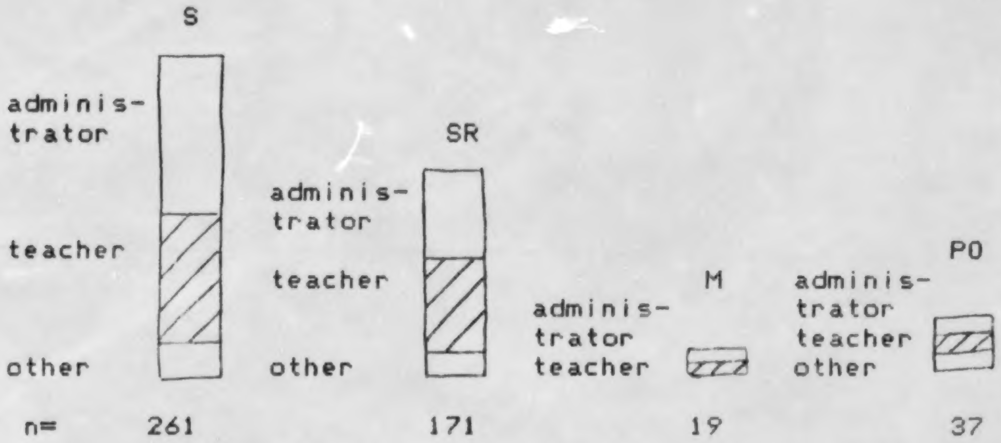
Search Categories

The 990 searches in the sample were divided by SMERC into four categories: S for standard search, SR for repeat search, PO for a request receiving a printout only, and M for miscellaneous searches. The SR searches are topics that duplicate searches already done and can be answered from the SMERC file of master searches. PO searches arise in three situations. Half of them come from St. Mary's College or La Verne University whose contracts restrict them to printouts only. In the next most common case, the client requested a printout only. This could be because the client has already seen a great deal of the material on this subject or because he or she has access to a good collection and would rather retrieve material directly. Another possible case finds the SMERC researcher unable to decide on the relevance of items in the printout to the client's needs. The M searches, the final group, are those that for some reason are too idiosyncratic to be added to the search files. The breakdown of these types within the sample was as follows:

S	55%
SR	33%
PO	8%
M	4%.

Patterns were sought in particular among the repeat searches. Does this type of search come from any specific class of user or location? In general, the answer was no. Repeat searches were almost equally divided between teachers and administrators. Both teachers and administrators asked more new questions than repeat questions.

table V5: Search Type by Position of Requestor
(based on table 5 appendix G)



When figures for individual states are examined, the pattern becomes more complex. In Arizona, Nebraska, and Multnomah County, Oregon, clients asked more repeat questions than new questions. In California, Florida, and Alaska, there were at least twice as many new questions as repeat questions.

table V6: Search Type by State

	S	SR	M	PO	total	searches
Arizona	42%	48%	3%	7%	100%	188
California	60%	25%	4%	11%	100%	444
Oregon	41%	40%	9%	19%	100%	119
Virgin Islands	59%	39%	2%	0	100%	91
Florida	80%	16%	4%	0	100%	77
Alaska	64%	32%	2%	2%	100%	41
Nebraska	30%	59%	0	11%	100%	27
Hawaii	100%	0	0	0	100%	2

Repeat searches were also examined with respect to the subjects of the questions. Repeat searches were most numerous in subject areas III and IV which include descriptor groups related to educational processes and structures and those related to curriculum areas. These are also the two areas in which requests of all types peak, but the peak is most pronounced in the repeat searches. It is logical that popular subject areas should include popular questions.

General Results

The most significant finding of the content analysis is the wide dispersion of the requests over the various categories. Subject analysis, for example, found that all but two of the forty-one categories were used. Moreover, the cross-tabulation by position of requestor showed that all but six of the categories requested were requested by both teachers and administrators.

The content analysis results are severely limited in what they can demonstrate. There is little to be learned from examining only requests for information. Request statements are short, and frequently they are ambiguous. Placing them in subject and material type categories required a good deal of subject knowledge, inference, and judgment. A further weakness came from the presence of requestor position information on only half of the requests. Many of the cross-tabulations are based on this smaller set of requests since position of requestor was a major factor of interest. Nevertheless, the content analysis results should allow some comparison with the much smaller set of interview results. This comparison should establish whether those interviewed are similar to the general run of SMERC clients in demographic terms as well as whether their requests are typical of SMERC requests.

VI RESULTS OF THE INTERVIEWS

General Trends

Interviews were completed with forty-eight of the fifty-four who returned postcards. Responses that occur almost universally in these interviews indicate that SMERC has a very positive image among its users. More than forty stated that they were satisfied with their search and all stated that they would use SMERC again. Users questioned also agreed that the SMERC service was convenient and that their linking agent was helpful. These responses seem to validate the SMERC service design. The one-stop nature of the service is appreciated, and the diffuse nature of the linking agent system is not seen as a drawback by its users. The clients generally were very pleased and grateful for the service of their linking agent. If important details are being lost when requests pass through several hands, it is not obvious to the clients. It is also possible that only good linking agents are being used. Since the interviews involved only users, potential clients of poor linking agents could have been excluded. The very frequent responses, although providing a pleasant affirmation of the virtues of SMERC, leave little to be analyzed. For analysis, one must turn to questions on which the responses were more variable.

The Sample

Users interviewed are spread around the state of California in a mixture of urban and rural settings.

table VI 1

Composition of Interview Sample

contracting agency	number of users in sample
San Mateo County	12
Kern County	9
Riverside County	8
Santa Clara County	4
Sacramento County	3
Orange County	3
Placer County	2
Glenn County	2
Merced County	2
Santa Barbara County	1
El Dorado County	1
Novato School District	1
total	48

The allocations by county are skewed from the occurrence in the content analysis by the appearance of large numbers of Kern County names in the drawn sample. The sampling period happened to coincide with an inservice program in Kern County devoted to SMERC. Many of those attending sent in questions in order to try out the service. Most of these were teachers from rural schools, and this group therefore is better represented than it might have been. Of course, because of the small size of the sample it can not be considered representative of the individual counties. It represents SMERC users in a more general way. People interviewed fill a variety of positions: twenty administrators, fourteen teachers, three psychologists, three counselors, two librarians, two speech specialists, one consultant, one welfare worker, and one volunteer. The relative frequencies of positions is the same as in the content analysis. The percentage of teachers is somewhat lower than in the earlier sample (twenty-nine percent versus forty-one percent).

Situation Information

Open-ended questions about the subjects' reasons for submitting a request to SMERC yielded the most interesting results. The more complete information provided by interviews allowed a breakdown by purpose of request rather than by type of material requested. Just nineteen of the requests were for subject matter materials to be incorporated into teaching. Many requests were submitted because the client was facing some change in the work situation. Some were seeking change, some were fighting change and some were merely seeking to cope with change.

In one case where everything seems to have gone right, a resource teacher was looking for strategies to integrate the first totally non-English-speaking student into a rural junior high school. After consulting local libraries and colleagues, she still needed new ideas, so she asked the district librarian to submit a SMERC search. In what seemed like a short time, a packet of materials arrived. It contained leads to sources of tutoring and bilingual materials and a variety of ideas that enabled the school to place the student in a suitable program.

People planning changes in their work used SMERC to obtain models or background information. A counselor designing a referral form wanted to see other forms already in use. A pregnant teacher gathered data on the educational effects of partnership teaching in hope of convincing her administration that she should teach half time after the baby was born. A librarian sought statistical data to support her request for an electronic security system in the library.

Alarmed by a school-sponsored workshop on assertive discipline, one teacher started gathering information to use as a defense against expected pressure to use the technique. She wanted criticisms of the technique and background on its creator. She especially wanted to know whether this person had any actual classroom experience. Since the expected pressure had not developed, she filed away the materials she received until the defense should be needed.

The finding that many SMERC users were facing some change relates nicely to findings in the literature about reasons for using information search services. The studies surveyed found that online literature search services were used by beginning researchers. Although SMERC users are not researchers and are usually not beginners at their jobs, they turn out to be using SMERC to help them deal with some situation with which they have little experience.

Some of the interviews turned up uses of SMERC in a scientific spirit, looking for explanations of phenomena found in the schools. A special education teacher asked for research results explaining why he had so many more boys than girls in his classes. He suspected that there was a cultural factor in student selection that led to this imbalance. Finding some confirmation of this theory in the materials he received, he decided to spend more time with the girls in his classes because they were likely to have the most severe problems. Similarly, a school district official doing a research project used SMERC to find confirmation and explanations for her data.

In only three cases, interview subjects mentioned that their request was connected with course work or thesis research. Since this type of use is not considered altogether legitimate, there may have been other clients interviewed who did not mention that their request was related to a thesis.

A novel use of SMERC was made by one school district administrator. Distrusting the conclusions derived from a SMERC search by officials of another district, he requested an identical search. He used the results in meetings and presentations to show how the data were being misinterpreted by the other group. In this case the client was not interested in new information. Most of the items were things that he had seen before, but that made no difference. It was only important that the packet duplicate the one received by the other district.

An unusual interview resulted when a request was traced back to an individual who had no idea his materials had come from SMERC. He didn't even know that such an organization existed. He had requested information from the media service office of his district. The request had been relayed to a nearby district that had a SMERC contract and then on to SMERC. The end user, who had not received a letter requesting an interview due to the indirect nature of his SMERC connection, was surprised to be contacted by an interviewer and less cooperative than most.

In another part of the situation analysis, the questions were divided into administrative and teaching-related groups. Administrative tasks predominated (thirty-two cases). There was some crossover between position and task. Three teachers asked administrative questions, and two administrators asked teaching questions. Ten of the thirteen clients in other types of positions asked administrative questions.

It appears that users do not go to SMERC with unimportant questions. When asked to rate the importance of their request, thirty-six rated it as very important to them and nine rated it as somewhat important. Only two users rated their request "slightly important" and only one rated a request as "unimportant." Although the service is freely available to most of its users, they only bother to use it if they consider their question important.

A reverse situation was found when SMERC clients were asked to rate the time pressure connected with their search. Nine indicated extreme pressure, ten indicated some pressure, one indicated slight pressure, and twenty-eight indicated no pressure. Even searches that came to SMERC marked "ASAP" did not involve time pressure. All six of the clients whose searches were so marked noted little or no time pressure when interviewed. One of four clients whose searches were marked "rush" also noted no time pressure. This may indicate that questions asked by educators do not need quick response, or it may show that experience has taught users to use SMERC only when they have sufficient time to wait, going elsewhere for answers to urgent questions. One user mentioned that he had had good results with getting quick answers to rush requests. Another commented that he found it difficult to use SMERC for materials to be used in writing papers for quarter-length courses because too much of the term was consumed by the search process.

Clients were also asked to rate their concern about their search topic. "Concern" was not defined for the clients, but no one asked for clarification of the question. Each estimated his concern according to his own understanding of the term. The answers to this question were spread about evenly: twenty-three were very concerned; fifteen were somewhat concerned; seven were slightly concerned; and three were not concerned. Users were more apt to rate their search as extremely important than to rate themselves as extremely concerned.

In answer to another question, users reported varying degrees of knowledge of the subject of their request. The fourteen who reported a high degree of knowledge include four of the eight who were not entirely satisfied with their results. The group's claim to considerable knowledge is supported by their answers to a later question. Twelve of them reported already having seen some of the material in their search package. These results give support to the thesis that the SMERC service is least effective for experienced researchers.

User Expectations

Expectations held when the search is submitted are a key factor in the users' reactions to SMERC service. When asked, "Did you expect or prefer a particular result?," eighteen replied "no" and twenty-nine described some expectation. One client, who was not satisfied with her search, expected, "Quick responses, relevant, up-to-date, that can be used the next day." She received more than she wanted to read, so she didn't use any of it. Several clients wanted material to support a particular position such as the teacher who wanted criticism of assertive discipline. Such a desire is not always expressed in the search request which is usually framed as a neutral request for information or data on a topic. Others wanted only recent items or only journal articles. These preferences, too, were not transmitted with the search request.

Search Histories

In answers to questions about the history of their information quest, forty percent of those interviewed reported that they had taken their questions directly to SMERC before trying other information sources. Fifteen of those interviewed were regular SMERC clients who have made it their first choice information source for certain types of questions. Another four came to SMERC first because they had just been introduced to it and were trying it out to see what it could do. Having received an answer from SMERC, half of those interviewed stopped their information search. The rest, sometimes using leads provided by SMERC, went on to use additional resources. (See table VI 2)

Users in the sample reported several levels of SMERC use. Fourteen were new users, using SMERC for the first or second time; twenty-six were regular users, reporting two to five uses per year; and eight were frequent users, reporting more than five uses per year. When asked what they thought of the service they received this time, most replied positively about the quality of the service. Others commented on materials, formats and other aspects of the transaction. These comments helped to clarify their answers to other interview questions.

table VI 2:

Information Sources Used by SMERC Clients

(in numbers of clients, n=48)

information source	used before SMERC	used after SMERC
libraries	19	8
colleagues	13	5
own books & files	9	0
journals	3	4
State Dept. of Education	2	1
professional associations	1	2
vendors	1	1
conferences	1	1
personal visits	0	3
consultants	0	3
resubmit to SMERC	0	1
ERIC hand search	0	1

Perceived Speed of Response

By the time they were interviewed twenty to ninety days after their search left SMERC, few clients had an accurate idea of how long they had waited for their search. Estimates given in the interviews were compared with the elapsed time between the earliest date shown on the search form (sometimes the date the request was given to the linker and sometimes the date the request reached SMERC) and the date the completed search package left SMERC. Another five days were allowed for transit time. Plausible recollections were given by 18 clients. The client's recollection of time elapsed was short in thirteen cases and long in seven cases. Eight clients gave no figure: four said the service was quick; two said it was fast enough; and two said it was slow. Interestingly, the four who commented "quick" received slower-than-average service. The mean time from first date on search form to completion was fifteen days for the whole sample. For the four who called the service quick, the mean time was eighteen days. Searches marked "rush" left SMERC in one to six days. Searches marked "ASAP" took from thirteen to twenty-four days with the mean time being nineteen days. The "ASAP" designation is not considered a rush request by the SMERC staff.

Evaluations of the Materials

To get an assessment of the relevance of the search packet to the client's request, each was asked, "Did the materials match your question in topic?" Eighty-five percent gave a positive answer, indicating the packet was topically relevant (relevance I). The general questions about the usefulness of the search aimed at determining whether the packet was also relevant in terms of relevance II. Clients also were asked if the materials were new to them. Seventy-seven percent replied that at least some were new.

The quality of the ERIC documents retrieved by SMERC was judged adequate by most users. Three-fourths of those interviewed stated that the quality of the materials they received was high. A similar percentage stated that it was worth their time to read the materials they received. This duplicates Asher and Vockell's findings on the evaluation of ERIC materials by educational practitioners.

Use of the Search Package

Most clients reported using their search package as soon as it arrived, reading or skimming it immediately. Most users started with the printed materials. In at least one case, a user stopped with the print materials and declared the rest irrelevant without looking at it, although the search analyst had pointed out pages in the fiche that appeared to be appropriate. When clients were asked what they had read, seventeen reported having read everything; four reported having read nothing; ten reported having scanned or glanced at the materials; seven reported having read the print materials only; nine reported having read half or most of the materials; and one reported having read all the materials that were new to him. Questions about the formats confirmed that items on fiche were less likely to be read. As one client said, "It's so small, and they send so much of it." All clients liked paper copies, but only fourteen liked to use fiche. Eleven reported that they were willing to use fiche, and twenty-six actively disliked it.

The amount of material included in the package is satisfactory to most clients. Of those interviewed, twenty-nine said the amount was just right, thirteen said it was too little, and two said it was too much.

As of the date of the interviews, fifty-six percent of the clients could report that they had used the materials from their search to some effect: fifteen had incorporated information into their writing or presentations; three had used techniques in their teaching or therapy; four had used models to design some program or object; and five had reached some conclusion related to a question of interest to them. Of those who had not yet used the materials, six had plans to use them later in the year; three had filed them; five had passed them on to others; and seven had concluded that the package was of no use to them. These results confirm that many of the questions did not involve time pressure. They also indicate that evaluating an information service on the basis of very short-term effects will eliminate a number of satisfactory and productive interactions from consideration.

When clients were asked to place a monetary value on their search, answers varied widely. About half of those interviewed said that they did not know or could not estimate. Dollar estimates ranged from 0 to $5,000, the latter being the cost of a graduate student to spend a term doing library research. The most frequent response was a modest ten dollars. The mean response was $450 and the median response was $40. Answers of several hundred dollars generally resulted from calculations involving so many hours of the client's time multiplied by an hourly salary. Other calculations involved only milage or the price of a book. Some clients mentioned large amounts of money that they might receive from a grant or might lose if they lost their job, but they didn't assign the entire value to the search. Others calculated a value for the search then added that they wouldn't have done the research if they had had to pay such an amount.

Structured questions about the uses made of the materials were not as productive as the open-ended questions. The suggestions made in this set of questions seem to represent the possible uses of information reported in the interviews. Answers to this series of questions confirmed that clients do use materials in all these ways. However, because the uses were suggested serially, clients tended to pick several uses and there was no way of determining which were most important to them. As one client put it, "You've made me come up with things that I didn't even know I thought." To rate the various uses effectively, a different form of question would have to be used, and it probably would require a personal interview or self-administered questionnaire.

Satisfaction

At the end of the interview, clients were asked if they considered themselves satisfied with their search results. The reply was consistently "yes" (forty clients) with five saying "no" and three saying "somewhat." Many yeses were enthusiastic: "Definitely," "Very much," "Absolutely," and "Ecstatic." Analysis of the few dissatisfied users produced a pattern of sorts. The three factors appearing in their explanations were relevance, quantity of material, and quality of material. Six said that they got too little material. Three didn't get pertinent material. One complained of low quality material. All dissatisfied clients mentioned either irrelevant or insufficient material.

Although some said that they were satisfied, there were thirteen clients who stated that the quantity of material received was inadequate. Thus, by this indicator, twenty-seven percent of the clients were dissatisfied. Ten of these had not found the particular item they hoped to get. The others stated that they "could have used more." There is no way to tell for most of these whether the missing item was a problem of the data base, a search error, or an unrealistic user expectation.

Several attempts were made to combine the answers to several questions into an index expressing user satisfaction or dissatisfaction, but none of the results correlated very well with general client statements about satisfaction or with user expectations.

VII Comparison of Content Analysis and Interview Results

In most cases the two approaches to the study of SMERC use are compatible. Similarities between the content analysis results and the composition of the interview sample indicate that those interviewed are generally representative of SMERC users. This gives support to conclusions drawn from the interview results.

The finding that requestor composition is different in California from that in other states limits the generality of the interview results. The interview sample is representative of California in particular. Both the content analysis and the interview sample confirmed that administrator use is higher than teacher use in California, but the content analysis data call into question earlier results indicating that administrator use is always higher than teacher use. It appears that this is true only for California.

Materials Requested

Although the interviews were directed toward the purpose of the request and content analysis was limited to the type of material requested, some relations can be drawn between the two types of results. One can explain some of the content analysis results using the general pattern found in the interviews. Many of those interviewed were seeking aid in making some change in their work. In the larger sample, the large number of teachers requesting curriculum materials could be changing their teaching program--incorporating a new subject or level. This would explain their need for new curriculum-related materials. Similarly, the large number of administrators seeking models and techniques could be involved in changes in their work necessitating new programs or approaches.

The interview sample request forms can be classified in the same way as the larger sample by type of material requested. Requests for subject matter material form the same proportion in each group. Forty-two percent of the interview sample requests fell into this category, and forty-two percent of the content analysis group were so classified. The low interest in research materials was also consistent. In both groups, only ten percent specified that they wanted research results.

Search Novelty

In both the content analysis and interview data, more searches were classified S, new search, than SR, repeat search. This consistency makes it possible to assume that a request brought to SMERC is more likely to be new in some respect than to be an exact duplicate of an earlier request. This reinforces findings of other studies mentioned in the literature review about the individual nature of information requirements.

Request Reliability

Comparison of the interview results with the original request forms turns up discrepancies that support the use of an interview approach to information service evaluation. At some point in the transfer process from client's thoughts to linker to SMERC, the request can get cleaned up or translated away from the client's intention. One example is the teacher described earlier who was looking for arguments against using assertive discipline. The request that reached SMERC stated:

> We are incorporating assertiveness training and discipline into our school. In order to make a complete evaluation and report to the general faculty, we would like background on the program and on Lee Cantor.

But the client was hoping for criticism of the technique. She also wanted to know if Cantor had any actual teaching experience. Either she was unable or embarassed to state her hopes or the linker restated the request in neutral form.

Some clients interviewed were surprisingly well served considering how poorly their questions were transmitted. Although her request asked for methods of teaching word problems in elementary mathematics, the client stated that she was actually trying to discover why a particular technique did not work. She received material that answered her question, but the result appears to have been fortuitous. She was interested in research results in particular and in a specific technique, but these factors were not mentioned on the request form.

The special education teacher interested in the numbers of males and females in his classes had similar results. In describing his request to the interviewer he mentioned an interest in whether the imbalance between males and females in special education was found in other countries. Because the entire request was handled at SMERC, it was possible to review it with the searcher who took the request and filled it. She recalled that the client had not mentioned other countries or cross-cultural comparisons. The request form says, "Why are there more men or boys in L.D. classes than women?" If he had mentioned other cultures, she would have sent him a book that covered that aspect of the question. Nevertheless, some of the articles sent the client did mention cultural factors as the cause of the discrepancy. He was very pleased with these, and this may have influenced his recollection of the original question. According to the record, he appears to have been lucky--getting what he wanted when he had not explained his request fully. Ironically, this client was the only one to comment:

> I've never had a bad search. It's the requestor's fault if they get a bad search. [You] need to be very specific.

Although the clients may be influenced by hindsight when stating their request to an interviewer, there are enough cases to make it clear that the request statement does not always represent the request accurately. This means that content analysis based on the request statements can only approximate understanding of the requests. The distinctions turned up by the interviews could make a difference in the classification of the requests as it was done for the content analysis segment. It changes the classification if the client wants research but does not mention it or if the focus is international but that is not mentioned.

Summary

Comparison of the two segments of this study turns up many similarities. There are two areas in which the results are somewhat contradictory. First, the interview results are shown to be representative of California only because of differences in client composition in other states. Second, discrepancies between client intentions and the request statements found through the interviews mean that the content analysis does not summarize client information needs reliably. For some cases, content analysis summarizes what the clients asked or what the linking agents transmitted rather than what the clients wanted to know.

VIII CONCLUSIONS AND IMPLICATIONS

The findings of the two segments of this study are given in detail in the three preceding chapters. This chapter will relate these findings to the major goals, the specific hypotheses, and the evaluation-related questions outlined in chapter three.

Characterization of SMERC Use.

The first goal of this study was to describe SMERC requests through an analysis of some 1000 of them. The average request to SMERC can be characterized simply. The request concerns the operation of schools in some way. The request is a new one for SMERC, so it is researched using an ERIC computer search and other tools. The client receives a printout and a pile of microfiche and photocopies. The size of the content analysis sample gives fair confidence that the details given here are accurate, at least for California. Regional variations in the use of the service could be another study. The use made by teachers in the Virgin Islands, for example, looks to be quite different from the use made by California administrators.

The second goal was to discover how the information is used. Data on use made of the search package comes from some fifty interviews. One can describe a case that is typical of the sample. An administrator in charge of teacher training requested a search on the legal requirements of bilingual programs. This was a topic requested by teachers and formed part of an on-going training program. The task was somewhat important, and she was somewhat concerned about it, but there was no time pressure for completion of the search. Her experience in the field meant that this client knew a fair amount about the topic requested. She began her search at SMERC because she had had good service from them in the past. When it arrived, she read the print right away, but she has not read the microfiche. She evaluated the materials she had read as being on target and of good quality and in the right quantity. She could not estimate a monetary value for the materials, but they were worth reading. The materials received brought about no changes in the client's opinions or work. They served instead to confirm opinions already held. She used the materials when compiling talks on the topic for school district personnel. The client was satisfied with her search and intends to use SMERC again. Although this client is not with the majority on every question answered, her case does illustrate most of the major findings concerning the circumstances surrounding SMERC use and the results of SMERC use.

Client reactions to SMERC service are like those of earlier studies in the general positive result. Most users were satisfied, and all intend to use SMERC again. They all found the service convenient and their linking agents helpful. The results are more positive than many studies in that fifty-six percent of those interviewed report having made use of the materials received. One reason for this may be that ninety-five percent of the clients interviewed rated their request as very or somewhat important, indicating a fairly strong motive for making use of the results. This finding confirms one of the hypotheses put forward in the introduction. The requests brought to SMERC are considered important by those that ask them. Less important questions do not make their way to SMERC. Results relating to the specific hypotheses of chapter three follow.

Results Relating to Specific Hypotheses

1) SMERC use forms part of a larger information gathering and dissemination process.

More than one-third of the clients interviewed brought their request directly to SMERC without consulting any other sources. Some of these were new clients trying out SMERC for the first time in connection with a workshop presentation. Because their requests were collected at the workshop, the use was artificially stimulated. They might not have pursued the topic at all if they hadn't been encouraged to make use of SMERC. Another fifteen of the clients interviewed were regular SMERC users who stated that they had brought their request directly to SMERC. As one stated, "I have used SMERC before. It was effective." Although these clients may have done some preliminary research in informal channels that they didn't mention, it seems clear that for a group of its regular users SMERC is the first choice among information sources for types of questions appropriate to the service.

A larger group of users does some preliminary research before bringing a question to SMERC. As one put it, "We try to do our home work." Sources mentioned most frequently are libraries of various kinds, colleagues, personal books and files, and journals. Eight of the clients had conducted systematic or wide-ranging information searches before going to SMERC. The others had consulted one or two sources close at hand then proceeded directly to SMERC. They indicated that they expected SMERC to save them time and effort in meeting their information need. Contrary to expectations, more clients mentioned consulting libraries than consulting colleagues (See table VI 2). Since consulting colleagues was mentioned in the question, it is unlikely that those interviewed simply forgot to mention that they consulted colleagues. If they did discuss their topic with colleagues, they did not seem to consider it part of their information search. Further research could be directed to discovering whether educators are indeed more apt to consult the library than their colleagues and if so, why.

As expected there was no particular relation between the client's position and whether or not SMERC was the first information source consulted. This could mean that clients' personal information styles varied widely within position groups, or it could reflect differences in ease of access to SMERC.

Also as expected, information provided by SMERC was passed on to others. Forty-one of the clients interviewed passed on some of their materials. Five of them did nothing but pass on the materials they received. Some of these were passing the service on to others who were not themselves authorized users. Others were serving as information providers as part of their job.

2) Clients seek relatively small amounts of useful information rather than comprehensive or authoritative information.

The limited number of documents provided to clients by SMERC is adequate. Sixty percent of those interviewed said that the amount of material received was just right. Most of those who were not pleased with the quantity of material were unhappy because a particular item was missing, not because they really wanted to see larger amounts of material. There were only three clients who expected or would have preferred a larger package. These people were either doing a research project or amassing evidence to support some position.

The interview results also raise the possibility that many clients would be satisfied with an even smaller package, since some of them did not read any of their microfiche and half of them did not like using fiche. As one said, "It's so small and they send so much of it." Client comments also supported the general conclusion that useful information is what they want. One said:

> [I expected] quick responses, relevant, up-to-date, that can be used the next day. I don't appreciate having so much reading to do. I wanted something more to the point... I wish they would be a little more selective. All that microfiche stuff is too hard to use.

Another pronounced his package to be "as much as a person could absorb at one time."

3) SMERC clients are administrators or teachers playing administrative roles.

As expected, administrator use is heavy, especially considering that they are less numerous than teachers. The percentages are closer than expected. Administrators made up forty-six percent of those in the content analysis sample for whom position was known, and teachers made up forty-one percent. Moreover, these figures are dominated by the California results. Outside of California, it is likely that heavier use is being made by teachers. This is certain for some states and suspected for Arizona. More of the information resources of SMERC are going directly to teachers than has been suspected based on earlier SMERC data-gathering efforts.

Few teachers playing administrative roles were found in the interview sample. There were only three that indicated that their project was administrative. This confirms that such things happen, but it does not indicate that it happens often.

In the content analysis sample, of two hundred requests known to be from teachers seventy-seven percent were in the subject matter and curriculum areas. Some of these questions may have been related to administrative tasks, but they are more likely to be related to teaching. Thus, the expected crossover of teachers into administrative roles was not found.

4) High levels of satisfaction are expected from most SMERC clients except for those who are professional researchers.

Most clients interviewed were strong in their praises of SMERC. They said the service was "very good indeed," "outstanding," or "as always, outstanding." Few were willing to complain at all; all were planning to use the service again.

There is little evidence from the interviews about the reactions of professional researchers to SMERC, mostly because there are few researchers among SMERC's potential clients. One client was a teacher with a grant to investigate a new type of program, one was an administrator who conducts curriculum development research, and two were doing thesis research. Of these four, three were entirely satisfied with their searches. The fourth was satisfied that he had received all the information available but would have preferred to get more. He planned to expand the search and resubmit it to SMERC. There was no client interviewed who did research as his or her only job. Because such people are not found among SMERC clients, concern about the reaction of researchers to SMERC service seems to be unnecessary.

Implications for SMERC Operations

One major finding is that, although SMERC is extremely popular with its users, it is only handling one category of information request--requests that are important but not urgent. Handling just these may be satisfactory to SMERC management, but they could do more. They could emphasize their availability for urgent requests and prove it by improving the turn-around time for searches. They also could work to educate their users about their availability to respond to less important questions.

Another major conclusion is that when SMERC fails to please it is generally because client expectations have not been understood when the search was run. As described in chapter seven, interviews found discrepancies between the clients' stated intentions and the request statements coming to SMERC. Asking clients to describe the type of response expected or preferred along with the subject of the inquiry would improve the result or at least allow the search analyst to explain why the expectation could not be met. The request form could include a section headed: "Please describe the documents or information that would be the most helpful answer to your question." In addition, clients wanting arguments on just one side of an issue should be informed that it is legitimate to ask SMERC for a one-sided response.

As another approach to the problem of misunderstood expectations, SMERC could do further research to ascertain where the discrepancies originate. They may arise from confusion in the client's mind or in communication problems between the linking agent and the client. The linking agent may be guilty of "cleaning up" a client's request or restating it in more general terms. Linking agent training should include strong warnings against such practices.

Implications for Other Information Services

The high level of user satisfaction with SMERC indicates that the SMERC model yields an effective practitioner-oriented information service. The assumption that clients will be satisfied with "a few good documents" on their topic is supported by the interview results. Users appreciate the complete nature of the service. They are willing to delegate the selection task and receive actual documents immediately. They are willing to deal with intermediaries; a high level of user satisfaction is possible without user participation in the search.

The suggestions made for improving or enlarging SMERC could be applied to other services. Any information service needs to communicate to its clients what kind of service it can provide. And any information service could improve its results by better understanding client expectations for the service.

The generally positive nature of the interview results has implications for information centers planning evaluation efforts. As in this study, evaluation by current users is apt to be positive. If system failures are common such evaluation should find them. It is not going to tell much about non-use except in the unlikely case that users surveyed are displeased and determined to become non-users. Nevertheless, a variety of factors can be studied through user interviews. One can look at the extent or various degrees of satisfaction. One can study the range of users and purposes served. One can compare the service as seen by its users with the service planned by its providers. In fact, an extensive user's view of a service may make it fairly obvious why others do not use it. SMERC, for example, is used for requests its clients consider important but not urgent. Those with urgent information needs must go elsewhere, and those with less important needs may never try to meet them.

Implications for Research

This project was begun in order to describe client reaction to a specific type of information service and to test ways of evaluating that reaction. The interview survey did give partial answers to some questions and describe a segment of SMERC use, but the greatest value of the survey lies outside the quantitative results. By treating the interviews as short case studies and paying particular attention to the details volunteered by clients in answer to open-ended questions, one can get a better understanding of what goes on at SMERC. There is more evidence about the variety and individuality of SMERC use than about the constants of SMERC use. Although a few questions asked of every client would give a picture of how SMERC is succeeding at pleasing its clients, detailed case studies of a few requests would reveal much more about the interaction between information needs, users, and uses.

One client was a psychologist and counselor who was putting together a program for parents of teenagers with problems. This task was one of her five objectives for the year. A team including people from several disciplines was working on the presentation. The SMERC package that they received contained little that was new to all team members, but the receipt of the package "facilitated sharing in the team." Items new to some members were not new to others, but their appearance in the package brought them to the attention of everyone. In this case, the value of the materials was not their novelty or even confirmation of information, they were valuable as reminders of the existence of information.

Another client who had not yet read any of her package was, nonetheless, extremely pleased with it. She said that it strongly changed her view of a situation and strongly confirmed current practice or some decision. Either the materials had this effect just through their existence in her files, or good results from other searches were influencing her reactions to the one in question. She described herself as a regular user: "I really enjoyed the service. Put a happy face there."

A recent study conducted for the U.S. Department of Agriculture Science and Education Administration used a case study approach to the study of agricultural innovations (Consumer Dynamics, Inc.). The authors' justification for this approach would apply equally to a study of SMERC. They say that:

> The holistic case study approach does not seek to make predictive statements or generalizations in the same way that probabilistic research does. It can have predictive value, but this must be achieved through large accumulations of data, rather than through ingenious sampling techniques. Its principle aim is to find and analyze intelligible, meaningful patterns. One cannot, however, say that a particular case study (or even a group of case studies) bears a known relationship to a definable universe. The findings must therefore be used with both insight and caution.
>
> The potential payoff available through this approach, though, is so great that it overshadows the

> limitations, especially when the subject under investigation is as complicated as information use or decisionmaking. Breakthroughs in our understanding of these phenomena are far more likely to come from careful application of the holistic approach than through any quantitative methodology. (Consumer Dynamics, Inc. p 12-13)

The authors refer to Diesing who describes the method he calls holistic in greater detail. The SMERC interview results give the viewpoints of several informants on their reactions to a search package and the uses made of it. To do a full-fledged holistic study, one would need to use more than one or two types of evidence. To go further with this type of study of SMERC or of a similar service, one could do participant observation, panel studies, or extended case studies of interesting requests. Patterns found using this approach might be useful in designing or reforming other information services in a truly user-oriented fashion.

Whether or not it is used as part of a holistic study, the interview approach used here to study SMERC should be applied to other information service situations. Such an approach is well suited to display the complexity of human information gathering. It points out the discrepancies between stated requests and underlying intentions. It points out the importance to clients of interpersonal relations associated with use of an information service. Such discoveries are needed to expose the limitations of other types of data gathered about information services.

Summary of Major Findings

In general, SMERC clients are happy with the service. They plan to use it again. However, they will only make the effort to use SMERC if their question is important. They do not use it for trivial inquiries, and most do not use it for urgent inquiries. Clients interviewed did not seem to feel any great urgency about their search for information. Their recollections about how long a search took often were inaccurate. Few were concerned that their results took some three weeks to arrive. When the search does arrive, most clients are happy to see just a few documents. If they receive too much material, they may read none of it. Frequently, clients avoid reading the microfiche portion of their information packet. A few clients do not receive as much material as they would like. Further research into the distinguishing characteristics of this group, perhaps using a case study approach, might show a need for development of a specialized in-depth service. Even if they haven't read it all, clients usually are pleased with the search. They are grateful for the service and predisposed to evaluate it positively.

A major result of the interview survey was the uncovering of occasional discrepancies between user needs and their stated requests. Because the study treated the entire SMERC service network as an entity, there is no evidence about where the discrepancy originated. It could have been a failure of the search analyst to obtain clarification of the question, it could have been a faulty interpretation by a linking agent, or it could have been a lack of clarity in the client's statement that was not corrected by the linking agent. Further research into such situations could be productive. This problem is not limited to SMERC; it surfaces wherever intermediaries connect clients to information systems.

References

Consumer Dynamics, Inc. Final phase I report. Conclusions on the effects of decisionmaking behavior on the use of information. Beltsville, Maryland: Technical Information Systems, Science and Education Administration, U.S. Department of Agriculture, National Agriculture Library.

Diesing, Paul. Patterns of discovery in the social sciences. New York: Aldine; 1971. 350p.

Appendices

A. Search Request Form

B. Letter Sent to Interview Sample

C. Reply Postcard

D. ERIC Descriptor Groups

E. Sample Descriptor Group Display

F. Questionnaire

G. Data Tables

H. Comments from Users

Appendix A

10/9

SEARCH REQUEST FORM

GLENN COUNTY

San Mateo County Office of Education
EDUCATIONAL RESOURCES CENTER
333 Main Street, Redwood City, CA 94063 (415) 364-5600

NAME
Date Oct. 9, 1980
AFFILIATION
Date Needed RUSH! (has meeting next Fri., 10/17)
ADDRESS
Phone 916-934-7011
Willows (City) CA (State) 95988 (Zip)

For ERC Use Only
S/Sex Roles

TYPE OF SEARCH REQUESTED: ☐ Quick Identification (Document Reproduction Only)
☐ Computer Printout Only ☒ Complete Package Search

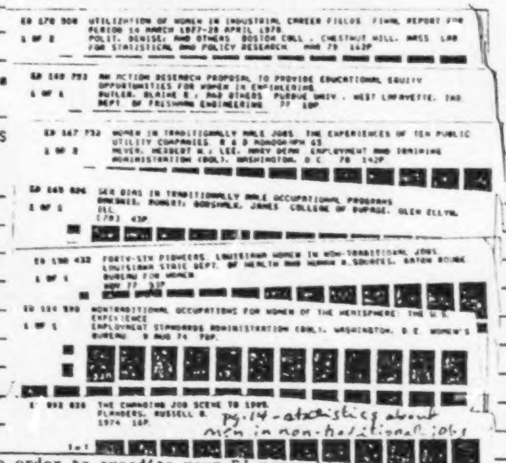
Concise Statement of Problem: Information regarding men and women who work in non-traditional occupations: trends, philosophy, opportunities, advantages, disadvantages. (community college/HS level)

How Material is

GRADE LEVEL RES

ERIC (ED)

Special Collections



ED 170 508 UTILIZATION OF WOMEN IN INDUSTRIAL CAREER FIELDS. FINAL REPORT FOR PERIOD 16 MARCH 1977-28 APRIL 1978.
1 OF 2
POLIT, DENISE; AND OTHERS BOSTON COLL., CHESTNUT HILL, MASS. LAB FOR STATISTICAL AND POLICY RESEARCH AUG 78 142P

ED 148 793 AN ACTION RESEARCH PROPOSAL TO PROVIDE EDUCATIONAL EQUITY OPPORTUNITIES FOR WOMEN IN ENGINEERING
1 OF 1
BUTLER, BLAINE E.; AND OTHERS PURDUE UNIV., WEST LAFAYETTE, IND. DEPT. OF FRESHMAN ENGINEERING 77 10P

ED 147 752 WOMEN IN TRADITIONALLY MALE JOBS: THE EXPERIENCES OF TEN PUBLIC UTILITY COMPANIES. R & D MONOGRAPH 65
1 OF 2
MEYER, HERBERT H.; LEE, MARY DEAN EMPLOYMENT AND TRAINING ADMINISTRATION (DOL), WASHINGTON, D.C. 78 142P

ED 143 826 SEX BIAS IN TRADITIONALLY MALE OCCUPATIONAL PROGRAMS
1 OF 1
EDWARDS, ROBERT; GORSHALK, JAMES COLLEGE OF DUPAGE, GLEN ELLYN, ILL. [78] 43P

ED 150 432 FORTY-SIX PIONEERS. LOUISIANA WOMEN IN NON-TRADITIONAL JOBS. LOUISIANA STATE DEPT. OF HEALTH AND HUMAN RESOURCES, BATON ROUGE BUREAU FOR WOMEN
1 OF 1
NOV 77 53P

ED 124 590 NONTRADITIONAL OCCUPATIONS FOR WOMEN OF THE HEMISPHERE: THE U.S. EXPERIENCE
1 OF 1
EMPLOYMENT STANDARDS ADMINISTRATION (DOL), WASHINGTON, D.C. WOMEN'S BUREAU 9 AUG 74 78P.

E[illegible] 092 026 THE CHANGING JOB SCENE TO 1985.
FLANDERS, RUSSELL B.
1974 16P.
pg. 14 - statistics about men in non-traditional jobs

CIJE Source (EJ #'s)	In order to expedite your EJ requests, please include the name of the journal, year, month, and pages needed. For example: Instructor 1/76 p28-30	Descriptors (Optional) "Sex Roles"
	Ed Hor Sp/79 p. 137-144 "Women in Medicine:	Ed Index '72 → 9/80
	Accommodation by Sex-Typing"	Sex Roles file
	USA Today 11/78 p. 27-30 Models of Women in Christian Tradition	
	J Bsn Ed 11/78 p. 75-78 Women in the 70's--Have Opportunities Really Changed?	
	USA Today 10/78 p. 4 Women in American Science	
	Comm Coll Rev Sp/78 p. 11-16 The Female as Technician	
	Am Ed 7/77 p. 20-26 Changing Male Roles	
	Am Ed 6/77 p. 27-30 Work, Women, and Vocational Education	
160 785	Comm & Jr Coll J 4/77 p. 28-30 AACJC Study: Women in Occuptional Education	
	Am Ed 12/74 p. 6-9 The Plumber's and He's a Woman	

Postings and/or Comments: There's much more info about women in non-traditional occupations than there is about men in non-traditional occupations.

Completed 10-13-80 HC PC 41 MF 9

AJoctt 7

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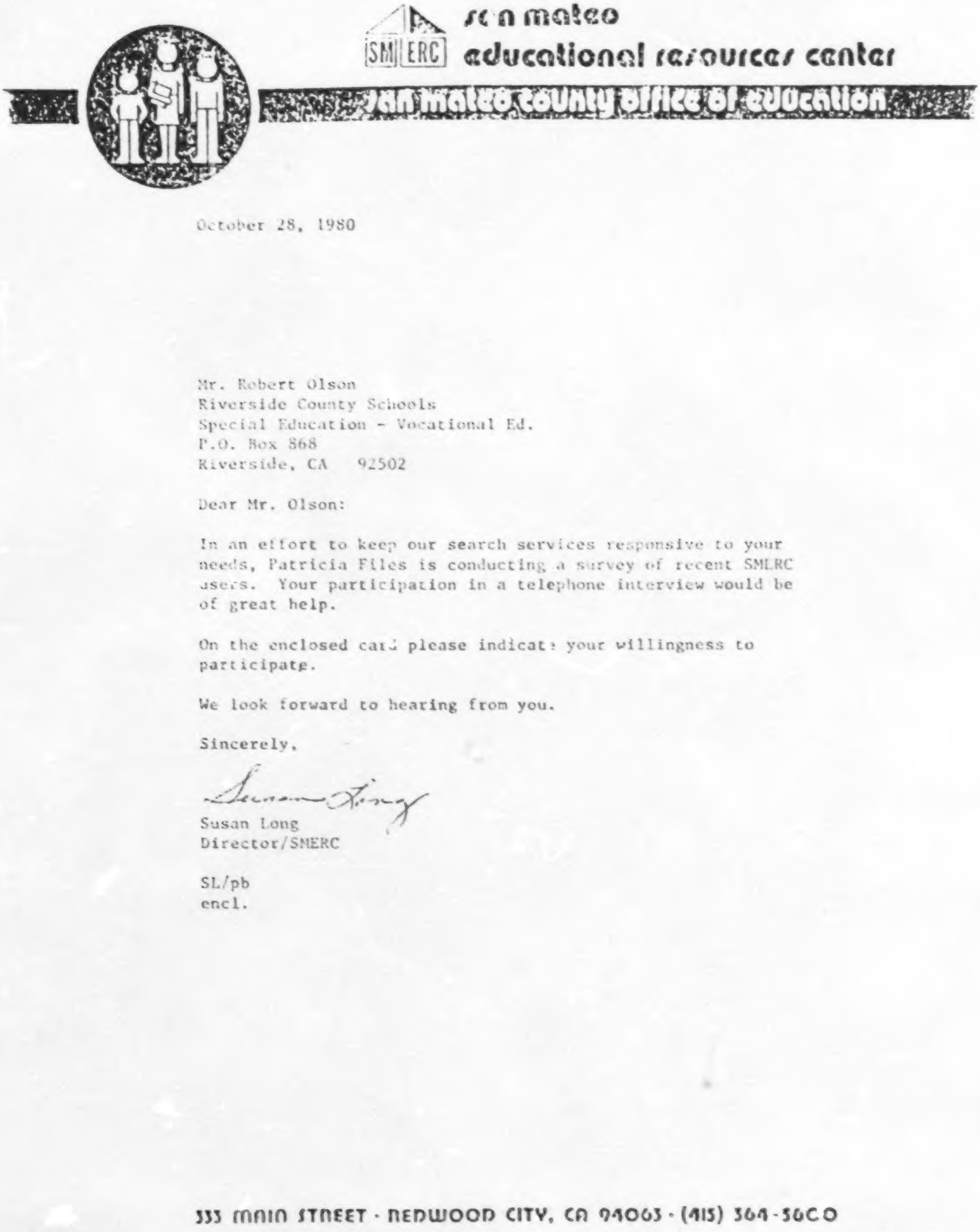
Appendix B

Letter Sent to Interview Sample



SMERC
san mateo
educational resources center
san mateo county office of education

October 28, 1980

Mr. Robert Olson
Riverside County Schools
Special Education - Vocational Ed.
P.O. Box 868
Riverside, CA 92502

Dear Mr. Olson:

In an effort to keep our search services responsive to your needs, Patricia Files is conducting a survey of recent SMERC users. Your participation in a telephone interview would be of great help.

On the enclosed card please indicate your willingness to participate.

We look forward to hearing from you.

Sincerely,

Susan Long

Susan Long
Director/SMERC

SL/pb
encl.

333 MAIN STREET · REDWOOD CITY, CA 94063 · (415) 364-5600

BEST COPY AVAILABLE

Appendix C

Reply Postcard

___ Yes, I am willing to be interviewed.

___ I may be called at my place of work.

preferred times: __________________

telephone number: _________________

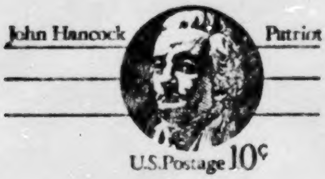
___ I may be called at home.

preferred times: __________________

telephone number: _________________

___ No, I do not wish to participate.

signature _________________



EDUCATIONAL RESOURCES CENTER
SAN MATEO COUNTY
SUPERINTENDENT OF SCHOOLS
333 MAIN STREET
REDWOOD CITY, CALIF. 94063

ATTN: P. FILES

© USPS 1978

Appendix D

ERIC Descriptor Groups

Groups Related to LEARNING AND DEVELOPMENT

LEARNING AND PERCEPTION
INDIVIDUAL DEVELOPMENT AND CHARACTERISTICS

Groups Related to PHYSICAL AND MENTAL CONDITIONS

HEALTH AND SAFETY
DISABILITIES
MENTAL HEALTH
COUNSELING

Groups Related to EDUCATIONAL PROCESSES AND STRUCTURES

THE EDUCATIONAL PROCESS: CLASSROOM PERSPECTIVES
THE EDUCATIONAL PROCESS: SCHOOL PERSPECTIVES
THE EDUCATIONAL PROCESS: SOCIETAL PERSPECTIVES
EDUCATIONAL LEVELS, DEGREES, AND ORGANIZATIONS
CURRICULUM ORGANIZATION
STUDENTS, TEACHERS, SCHOOL PERSONNEL

Groups Related to CURRICULUM AREAS

SUBJECTS OF INSTRUCTION
AGRICULTURE AND NATURAL RESOURCES
ARTS
HUMANITIES
LANGUAGES
LANGUAGE AND SPEECH
READING
PHYSICAL EDUCATION AND RECREATION
MATHEMATICS
SCIENCE AND TECHNOLOGY

Groups Related to HUMAN SOCIETY

THE INDIVIDUAL IN SOCIAL CONTEXT
SOCIAL PROCESSES AND STRUCTURES
SOCIAL PROBLEMS
BIAS AND EQUITY
HUMAN GEOGRAPHY
PEOPLES AND CULTURES

Groups Related to SOCIAL/ECONOMIC ENTERPRISE

GOVERNMENT AND POLITICS
ECONOMICS AND FINANCE
LABOR AND EMPLOYMENT
OCCUPATIONS
BUSINESS, COMMERCE, AND INDUSTRY

Groups Related to INFORMATION AND COMMUNICATIONS

INFORMATION/COMMUNICATIONS SYSTEMS
COMMUNICATIONS MEDIA
PUBLICATION/DOCUMENT TYPES

Groups Related to MEASUREMENT AND RESEARCH

RESEARCH AND THEORY
MEASUREMENT
TESTS AND SCALES

Groups Related to FACILITIES AND EQUIPMENT

EQUIPMENT
FACILITIES

Appendix E : Sample Descriptor Group Display

Rehabilitation Counseling
Rehabilitation Programs
Role Playing
School Counseling
School Counselors
School Guidance
Sensitivity Training
Student Personnel Services
Student Personnel Workers
Student Welfare
Teacher Guidance

Groups related to EDUCATIONAL PROCESSES AND STRUCTURES

THE EDUCATIONAL PROCESS: CLASSROOM PERSPECTIVES

Ability Grouping
Academic Achievement
Academic Failure
Academic Persistence
Acceleration
Achievement Gains
Advance Organizers
Affective Objectives
Aptitude Treatment Interaction
Assignments
Audiovisual Instruction
Behavioral Objectives
Class Activities
Class Average (1966 1980)
Class Organization
Class Rank
Class Size
Classes (Groups of Students)
Classroom Communication
Classroom Environment
Classroom Techniques
Cognitive Objectives
Competency Based Education
Computer Assisted Instruction
Computer Managed Instruction
Conventional Instruction
Course Content
Course Evaluation
Course Objectives
Course Organization
Creative Activities
Creative Teaching
Cross Age Teaching
Cultural Enrichment
Curriculum Enrichment
Demonstrations (Educational)
Developmental Studies Programs
Diagnostic Teaching
Educational Diagnosis
Educational Methods
Educational Strategies
Educational Therapy
Enrichment
Enrichment Activities
Episode Teaching (1967 1980)
Experience Charts
Experiential Learning
Experimental Teaching
Formative Evaluation
Global Approach
Grade Charts (1966 1980)
Grades (Scholastic)
Grading
Group Activities
Group Discussion
Group Instruction
Grouping (Instructional Purposes)
Heterogenous Grouping
Home Study
Homework
Homogenous Grouping
Honors Curriculum
Independent Study
Individual Activities
Individual Instruction
Individualized Instruction
Individualized Programs
Instruction
Instructional Design
Instructional Development
Instructional Improvement
Instructional Innovation
Instructional Programs (1966 1980)
Instructional Systems
Integrated Activities
Interdisciplinary Approach
Intermode Differences
Large Group Instruction
Learning Activities
Learning Centers (Classroom)
Lecture Method
Listening
Listening Groups
Management Games
Mastery Learning
Material Development
Microteaching
Motivation Techniques
Multigraded Classes
Multimedia Instruction
Negative Practice
Nonauthoritarian Classes
Object Manipulation
Pacing
Participant Satisfaction
Peer Teaching
Performance Contracts
Performance Factors
Practicum Supervision
Precision Teaching
Progressive Education
Prompting
Psychoeducational Methods
Psychomotor Objectives
Questioning Techniques
Redundancy
Remedial Instruction
Remedial Programs
Repetitive Film Showings
Resource Room Programs
Resource Units
Self Contained Classrooms
Sequential Approach
Simulated Environment
Simulation
Small Classes
Small Group Instruction
Special Classes
Student Behavior
Student Centered Curriculum
Student Development
Student Experience
Student Improvement
Student Interests
Student Motivation
Student Participation
Student Projects
Student Reaction
Student Teacher Relationship
Study
Study Habits
Study Skills
Substitution Drills
Summative Evaluation
Task Performance (1966 1980)
Teacher Behavior
Teacher Effectiveness
Teacher Improvement
Teacher Influence
Teacher Motivation
Teacher Response
Teaching Conditions
Teaching Experience
Teaching Methods
Teaching Models
Teaching Skills
Teaching Styles
Team Teaching
Team Training
Television Curriculum
Test Anxiety
Test Coaching
Test Wiseness
Textbook Content
Thematic Approach
Training Methods
Training Objectives
Tutorial Programs
Tutoring
Writing Exercises

Appendix F

Questionnaire

Name
position
date
time
location

I'm doing a study of the use made of SMERC. I'm interested in the client's entire information search process and how the use of SMERC fits into it. I'd like to ask you about several details of your recent search on:

What situation gave rise to this question?

Was it in connection with some special project or responsibility?

administrative_____ teaching_______

	very	somewhat	slightly	no
Was this an important task/issue for you?	__	__	__	__
Was there time pressure for completion?	__	__	__	__
How concerned would you say you were about it?	__	__	__	__

How much did you know about this particular subject before you started collecting information? a lot___ fair amt__ little___ nothing___

Often someone starts an information search with local or personal resources such as files, local libraries, or colleagues. Where did you begin your search?
Why?
Then, where did you go?
When (or why) did you decide to go to SMERC?

Did you go elsewhere afterward?

What did past experience lead you to expect from SMERC?

What did you think of the service you received this time?

Questionnaire (cont.)

Was it convenient for you to use SMERC?
Who submitted the search for you?
Was this person helpful?
How long did it take for your answer to arrive?

What did you think of it when you first received it?

Did you have time to read any of it immediately?
How much did you read eventually?

Did the material match your question in topic?
Was it new to you?
What is your opinion of the quality of the materials?

What it your opinion of the quantity of material?

Was it worth your time to read this material?
very____ somewhat____ worthless____ negative value____
How did you use the information in this material?

Did it have an effect on your work?

I'm going to suggest a variety of uses that could be made of information. Do these apply to your situation strongly, somewhat or not at all?

	strongly	somewhat	not at all
To change one's view of a situation	__	__	__
To change one's work (Ie. setting policy, choosing a program or changing some aspect of the classroom	__	__	__
To confirm current practise or some decision	__	__	__
Support of scholarship	__	__	__
General current awareness	__	__	__
To pass on to others	__	__	__
File for future use	__	__	__

Do you consider yourself satisfied with your search?
Will you use SMERC again?
Before we conclude, is there anything you would like to add?

Appendix G

1. Crosstabulation of ERIC Descriptor Group by Position of Requestor 107
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Appendix G table 1

Crosstabulation of ERIC Descriptor Group

by Position of Requestor

```
                    POSITION
           COUNT  I
         ROW PCT IADMINIST TEACHER  OTHER                     ROW
         COL PCT IRATOR                                       TOTAL
         TOT PCT I     1  I     2  I     3  I     4  I
SUBJECT  --------I--------I--------I--------I--------I
              11  I     5  I     3  I     5  I     0  I     13
                  I  38.5  I  23.1  I  38.5  I   0.0  I    2.7
                  I   2.2  I   1.5  I   8.2  I   0.0  I
                  I   1.0  I   0.6  I   1.0  I   0.0  I
                 -I--------I--------I--------I--------I
              12  I     8  I    10  I     2  I     1  I     21
                  I  38.1  I  47.6  I   9.5  I   4.8  I    4.3
                  I   3.5  I   5.0  I   3.3  I 100.0  I
                  I   1.6  I   2.0  I   0.4  I   0.2  I
                 -I--------I--------I--------I--------I
              21  I     4  I     5  I     0  I     0  I      9
                  I  44.4  I  55.6  I   0.0  I   0.0  I    1.8
                  I   1.8  I   2.5  I   0.0  I   0.0  I
                  I   0.8  I   1.0  I   0.0  I   0.0  I
                 -I--------I--------I--------I--------I
              22  I    15  I    12  I     6  I     0  I     33
                  I  45.5  I  36.4  I  18.2  I   0.0  I    6.8
                  I   6.6  I   6.0  I   9.8  I   0.0  I
                  I   3.1  I   2.5  I   1.2  I   0.0  I
                 -I--------I--------I--------I--------I
              23  I     7  I     3  I     4  I     0  I     14
                  I  50.0  I  21.4  I  28.6  I   0.0  I    2.9
                  I   3.1  I   1.5  I   6.6  I   0.0  I
                  I   1.4  I   0.6  I   0.8  I   0.0  I
                 -I--------I--------I--------I--------I
              24  I     4  I     1  I     3  I     0  I      8
                  I  50.0  I  12.5  I  37.5  I   0.0  I    1.6
                  I   1.8  I   0.5  I   4.9  I   0.0  I
                  I   0.8  I   0.2  I   0.6  I   0.0  I
                 -I--------I--------I--------I--------I
              31  I    11  I    20  I     1  I     0  I     32
                  I  34.4  I  62.5  I   3.1  I   0.0  I    6.6
                  I   4.9  I  10.0  I   1.6  I   0.0  I
                  I   2.3  I   4.1  I   0.2  I   0.0  I
                 -I--------I--------I--------I--------I
          COLUMN      226      200       61        1        488
           TOTAL     46.3     41.0     12.5      0.2      100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Position of Requestor (cont.)

```
                 POSITION
          COUNT  I
        ROW PCT  IADMINIST TEACHER  OTHER
        COL PCT  IRATOR                                     ROW
        TOT PCT  I      1  I      2  I      3  I      4  I  TOTAL
SUBJECT          --------I--------I--------I--------I--------I
             32  I     36  I     11  I      5  I      0  I     52
                 I   69.2  I   21.2  I    9.6  I    0.0  I   10.7
                 I   15.9  I    5.5  I    8.2  I    0.0  I
                 I    7.4  I    2.3  I    1.0  I    0.0  I
                -I--------I--------I--------I--------I
             33  I     18  I      5  I      5  I      0  I     28
                 I   64.3  I   17.9  I   17.9  I    0.0  I    5.7
                 I    8.0  I    2.5  I    8.2  I    0.0  I
                 I    3.7  I    1.0  I    1.0  I    0.0  I
                -I--------I--------I--------I--------I
             34  I      4  I      4  I      0  I      0  I      8
                 I   50.0  I   50.0  I    0.0  I    0.0  I    1.6
                 I    1.8  I    2.0  I    0.0  I    0.0  I
                 I    0.8  I    0.8  I    0.0  I    0.0  I
                -I--------I--------I--------I--------I
             35  I      3  I      2  I      2  I      0  I      7
                 I   42.9  I   28.6  I   28.6  I    0.0  I    1.4
                 I    1.3  I    1.0  I    3.3  I    0.0  I
                 I    0.6  I    0.4  I    0.4  I    0.0  I
                -I--------I--------I--------I--------I
             36  I      7  I      4  I      0  I      0  I     11
                 I   63.6  I   36.4  I    0.0  I    0.0  I    2.3
                 I    3.1  I    2.0  I    0.0  I    0.0  I
                 I    1.4  I    0.8  I    0.0  I    0.0  I
                -I--------I--------I--------I--------I
             40  I     21  I     28  I      6  I      0  I     55
                 I   38.2  I   50.9  I   10.9  I    0.0  I   11.3
                 I    9.3  I   14.0  I    9.8  I    0.0  I
                 I    4.3  I    5.7  I    1.2  I    0.0  I
                -I--------I--------I--------I--------I
             41  I      1  I      2  I      0  I      0  I      3
                 I   33.3  I   66.7  I    0.0  I    0.0  I    0.6
                 I    0.4  I    1.0  I    0.0  I    0.0  I
                 I    0.2  I    0.4  I    0.0  I    0.0  I
                -I--------I--------I--------I--------I
         COLUMN       226      200       61         1       488
          TOTAL      46.3     41.0     12.5       0.2     100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Position of Requestor (cont.)

```
                   POSITION
             COUNT  I
           ROW PCT  IADMINIST TEACHER  OTHER                  ROW
           COL PCT  IRATOR                                    TOTAL
           TOT PCT  I      1  I      2  I      3  I      4  I
SUBJECT     --------I---------I---------I---------I---------I
                42  I      5  I      5  I      4  I      0  I     14
                    I   35.7  I   35.7  I   28.6  I    0.0  I    2.9
                    I    2.2  I    2.5  I    6.6  I    0.0  I
                    I    1.0  I    1.0  I    0.8  I    0.0  I
                   -I---------I---------I---------I---------I
                43  I      0  I     15  I      1  I      0  I     16
                    I    0.0  I   93.8  I    6.3  I    0.0  I    3.3
                    I    0.0  I    7.5  I    1.6  I    0.0  I
                    I    0.0  I    3.1  I    0.2  I    0.0  I
                   -I---------I---------I---------I---------I
                44  I      1  I      3  I      2  I      0  I      6
                    I   16.7  I   50.0  I   33.3  I    0.0  I    1.2
                    I    0.4  I    1.5  I    3.3  I    0.0  I
                    I    0.2  I    0.6  I    0.4  I    0.0  I
                   -I---------I---------I---------I---------I
                45  I      2  I      1  I      1  I      0  I      4
                    I   50.0  I   25.0  I   25.0  I    0.0  I    0.8
                    I    0.9  I    0.5  I    1.6  I    0.0  I
                    I    0.4  I    0.2  I    0.2  I    0.0  I
                   -I---------I---------I---------I---------I
                46  I     10  I      8  I      0  I      0  I     18
                    I   55.6  I   44.4  I    0.0  I    0.0  I    3.7
                    I    4.4  I    4.0  I    0.0  I    0.0  I
                    I    2.0  I    1.6  I    0.0  I    0.0  I
                   -I---------I---------I---------I---------I
                47  I      6  I      5  I      0  I      0  I     11
                    I   54.5  I   45.5  I    0.0  I    0.0  I    2.3
                    I    2.7  I    2.5  I    0.0  I    0.0  I
                    I    1.2  I    1.0  I    0.0  I    0.0  I
                   -I---------I---------I---------I---------I
                48  I      2  I      7  I      1  I      0  I     10
                    I   20.0  I   70.0  I   10.0  I    0.0  I    2.0
                    I    0.9  I    3.5  I    1.6  I    0.0  I
                    I    0.4  I    1.4  I    0.2  I    0.0  I
                   -I---------I---------I---------I---------I
            COLUMN       226       200        61         1      488
             TOTAL      46.3      41.0      12.5       0.2    100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Position of Requestor (cont.)

```
                    POSITION
           COUNT  I
         ROW PCT  IADMINIST TEACHER  OTHER                 ROW
         COL PCT  IRATOR                                   TOTAL
         TOT PCT  I     1  I     2  I     3  I     4  I
SUBJECT  --------I--------I--------I--------I--------I
              49  I     3  I    10  I     0  I     0  I     13
                  I  23.1  I  76.9  I   0.0  I   0.0  I    2.7
                  I   1.3  I   5.0  I   0.0  I   0.0  I
                  I   0.6  I   2.0  I   0.0  I   0.0  I
                 -I--------I--------I--------I--------I
              51  I     2  I     5  I     1  I     0  I      8
                  I  25.0  I  62.5  I  12.5  I   0.0  I    1.6
                  I   0.9  I   2.5  I   1.6  I   0.0  I
                  I   0.4  I   1.0  I   0.2  I   0.0  I
                 -I--------I--------I--------I--------I
              52  I     6  I     1  I     2  I     0  I      9
                  I  66.7  I  11.1  I  22.2  I   0.0  I    1.8
                  I   2.7  I   0.5  I   3.3  I   0.0  I
                  I   1.2  I   0.2  I   0.4  I   0.0  I
                 -I--------I--------I--------I--------I
              53  I     1  I     0  I     0  I     0  I      1
                  I 100.0  I   0.0  I   0.0  I   0.0  I    0.2
                  I   0.4  I   0.0  I   0.0  I   0.0  I
                  I   0.2  I   0.0  I   0.0  I   0.0  I
                 -I--------I--------I--------I--------I
              54  I     0  I     4  I     0  I     0  I      4
                  I   0.0  I 100.0  I   0.0  I   0.0  I    0.8
                  I   0.0  I   2.0  I   0.0  I   0.0  I
                  I   0.0  I   0.8  I   0.0  I   0.0  I
                 -I--------I--------I--------I--------I
              56  I     3  I     3  I     0  I     0  I      6
                  I  50.0  I  50.0  I   0.0  I   0.0  I    1.2
                  I   1.3  I   1.5  I   0.0  I   0.0  I
                  I   0.6  I   0.6  I   0.0  I   0.0  I
                 -I--------I--------I--------I--------I
              61  I     3  I    10  I     1  I     0  I     14
                  I  21.4  I  71.4  I   7.1  I   0.0  I    2.9
                  I   1.3  I   5.0  I   1.6  I   0.0  I
                  I   0.6  I   2.0  I   0.2  I   0.0  I
                 -I--------I--------I--------I--------I
          COLUMN      226      200       61         1      488
           TOTAL     46.3     41.0     12.5       0.2    100.0
(CONTINUED)
```

Crosstabulation of ERIC Descriptor Group

by Position of Requestor (cont.)

```
                    POSITION
               COUNT I
             ROW PCT IADMINIST TEACHER  OTHER                ROW
             COL PCT IRATOR                                  TOTAL
             TOT PCT I     1  I     2  I     3  I     4  I
SUBJECT      --------I--------I--------I--------I--------I
                  62 I     4  I     0  I     0  I     0  I      4
                     I 100.0  I   0.0  I   0.0  I   0.0  I    0.8
                     I   1.8  I   0.0  I   0.0  I   0.0  I
                     I   0.8  I   0.0  I   0.0  I   0.0  I
                    -I--------I--------I--------I--------I
                  63 I     9  I     1  I     1  I     0  I     11
                     I  81.8  I   9.1  I   9.1  I   0.0  I    2.3
                     I   4.0  I   0.5  I   1.6  I   0.0  I
                     I   1.8  I   0.2  I   0.2  I   0.0  I
                    -I--------I--------I--------I--------I
                  71 I     4  I     1  I     4  I     0  I      9
                     I  44.4  I  11.1  I  44.4  I   0.0  I    1.8
                     I   1.8  I   0.5  I   6.6  I   0.0  I
                     I   0.8  I   0.2  I   0.8  I   0.0  I
                    -I--------I--------I--------I--------I
                  72 I     5  I     2  I     1  I     0  I      8
                     I  62.5  I  25.0  I  12.5  I   0.0  I    1.6
                     I   2.2  I   1.0  I   1.6  I   0.0  I
                     I   1.0  I   0.4  I   0.2  I   0.0  I
                    -I--------I--------I--------I--------I
                  81 I     3  I     0  I     1  I     0  I      4
                     I  75.0  I   0.0  I  25.0  I   0.0  I    0.8
                     I   1.3  I   0.0  I   1.6  I   0.0  I
                     I   0.6  I   0.0  I   0.2  I   0.0  I
                    -I--------I--------I--------I--------I
                  82 I     1  I     0  I     0  I     0  I      1
                     I 100.0  I   0.0  I   0.0  I   0.0  I    0.2
                     I   0.4  I   0.0  I   0.0  I   0.0  I
                     I   0.2  I   0.0  I   0.0  I   0.0  I
                    -I--------I--------I--------I--------I
                  83 I     7  I     4  I     0  I     0  I     11
                     I  63.6  I  36.4  I   0.0  I   0.0  I    2.3
                     I   3.1  I   2.0  I   0.0  I   0.0  I
                     I   1.4  I   0.8  I   0.0  I   0.0  I
                    -I--------I--------I--------I--------I
              COLUMN      226      200       61        1       488
               TOTAL     46.3     41.0     12.5      0.2     100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group by Position of Requestor (cont.)

```
                  POSITION
          COUNT  I
         ROW PCT IADMINIST TEACHER  OTHER                   ROW
         COL PCT IRATOR                                     TOTAL
         TOT PCT I      1  I      2  I      3  I      4  I
SUBJECT  --------I---------I---------I---------I---------I
              91 I      1  I      3  I      2  I      0  I      6
                 I   16.7  I   50.0  I   33.3  I    0.0  I    1.2
                 I    0.4  I    1.5  I    3.3  I    0.0  I
                 I    0.2  I    0.6  I    0.4  I    0.0  I
                -I---------I---------I---------I---------I
              92 I      4  I      2  I      0  I      0  I      6
                 I   66.7  I   33.3  I    0.0  I    0.0  I    1.2
                 I    1.8  I    1.0  I    0.0  I    0.0  I
                 I    0.8  I    0.4  I    0.0  I    0.0  I
                -I---------I---------I---------I---------I
          COLUMN      226       200        61         1       488
           TOTAL     46.3      41.0      12.5       0.2     100.0

RAW CHI SQUARE =   167.31125 WITH   108 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0002

NUMBER OF MISSING OBSERVATIONS =    502
```

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Appendix G table 2

Crosstabulation of ERIC Descriptor Group

by Type of Material Requested

```
                  REQUESTP
          COUNT  I
        ROW PCT  ISUBJECT  CURRICUL RESEARCH MODELS A POLICIES OTHER        ROW
        COL PCT  IMATTER  I UM MATER          ND TECHN                      TOTAL
        TOT PCT  I     1  I     2  I     3  I     4  I     5  I     6  I
SUBJECT          --------I--------I--------I--------I--------I--------I
              0  I     0  I     0  I     0  I     0  I     0  I     1  I      1
                 I   0.0  I   0.0  I   0.0  I   0.0  I   0.0  I 100.0  I    0.1
                 I   0.0  I   0.0  I   0.0  I   0.0  I   0.0  I   1.5  I
                 I   0.0  I   0.0  I   0.0  I   0.0  I   0.0  I   0.1  I
                -I--------I--------I--------I--------I--------I--------I
             11  I    21  I     3  I     4  I     4  I     0  I     0  I     32
                 I  65.6  I   9.4  I  12.5  I  12.5  I   0.0  I   0.0  I    3.2
                 I   5.0  I   1.2  I   3.9  I   3.0  I   0.0  I   0.0  I
                 I   2.1  I   0.3  I   0.4  I   0.4  I   0.0  I   0.0  I
                -I--------I--------I--------I--------I--------I--------I
             12  I    21  I     9  I     6  I     5  I     0  I     0  I     41
                 I  51.2  I  22.0  I  14.6  I  12.2  I   0.0  I   0.0  I    4.1
                 I   5.0  I   3.5  I   5.8  I   3.7  I   0.0  I   0.0  I
                 I   2.1  I   0.9  I   0.6  I   0.5  I   0.0  I   0.0  I
                -I--------I--------I--------I--------I--------I--------I
             21  I    10  I    10  I     2  I     2  I     0  I     3  I     27
                 I  37.0  I  37.0  I   7.4  I   7.4  I   0.0  I  11.1  I    2.7
                 I   2.4  I   3.9  I   1.9  I   1.5  I   0.0  I   4.6  I
                 I   1.0  I   1.0  I   0.2  I   0.2  I   0.0  I   0.3  I
                -I--------I--------I--------I--------I--------I--------I
             22  I    33  I    23  I     9  I    14  I     1  I     2  I     82
                 I  40.2  I  28.0  I  11.0  I  17.1  I   1.2  I   2.4  I    8.3
                 I   7.9  I   9.0  I   8.7  I  10.4  I   8.3  I   3.1  I
                 I   3.3  I   2.3  I   0.9  I   1.4  I   0.1  I   0.2  I
                -I--------I--------I--------I--------I--------I--------I
             23  I    14  I     2  I     2  I     3  I     0  I     3  I     24
                 I  58.3  I   8.3  I   8.3  I  12.5  I   0.0  I  12.5  I    2.4
                 I   3.3  I   0.8  I   1.9  I   2.2  I   0.0  I   4.6  I
                 I   1.4  I   0.2  I   0.2  I   0.3  I   0.0  I   0.3  I
                -I--------I--------I--------I--------I--------I--------I
             24  I     7  I     3  I     1  I     3  I     0  I     0  I     14
                 I  50.0  I  21.4  I   7.1  I  21.4  I   0.0  I   0.0  I    1.4
                 I   1.7  I   1.2  I   1.0  I   2.2  I   0.0  I   0.0  I
                 I   0.7  I   0.3  I   0.1  I   0.3  I   0.0  I   0.0  I
                -I--------I--------I--------I--------I--------I--------I
         COLUMN      419      256      103      135       12       65      990
          TOTAL     42.3     25.9     10.4     13.6      1.2      6.6    100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Type of Material Requested (cont.)

```
                      REQUESTP
                COUNT I
              ROW PCT ISUBJECT  CURRICUL RESEARCH MODELS A POLICIES OTHER      ROW
              COL PCT IMATTER I UM MATER          ND TECHN                     TOTAL
              TOT PCT I     1 I     2  I     3  I     4  I     5  I     6  I
SUBJECT       --------I-------I--------I--------I--------I--------I--------I
                  31  I    21 I    16  I    15  I     9  I     0  I     1  I    62
                      I  33.9 I  25.8  I  24.2  I  14.5  I   0.0  I   1.6  I   6.3
                      I   5.0 I   6.3  I  14.6  I   6.7  I   0.0  I   1.5  I
                      I   2.1 I   1.6  I   1.5  I   0.9  I   0.0  I   0.1  I
                     -I-------I--------I--------I--------I--------I--------I
                  32  I    39 I     2  I    11  I    29  I     2  I     5  I    88
                      I  44.3 I   2.3  I  12.5  I  33.0  I   2.3  I   5.7  I   8.9
                      I   9.3 I   0.8  I  10.7  I  21.5  I  16.7  I   7.7  I
                      I   3.9 I   0.2  I   1.1  I   2.9  I   0.2  I   0.5  I
                     -I-------I--------I--------I--------I--------I--------I
                  33  I    21 I     4  I     2  I    16  I     1  I     0  I    44
                      I  47.7 I   9.1  I   4.5  I  36.4  I   2.3  I   0.0  I   4.4
                      I   5.0 I   1.6  I   1.9  I  11.9  I   8.3  I   0.0  I
                      I   2.1 I   0.4  I   0.2  I   1.6  I   0.1  I   0.0  I
                     -I-------I--------I--------I--------I--------I--------I
                  34  I    23 I     3  I     4  I     4  I     0  I     1  I    35
                      I  65.7 I   8.6  I  11.4  I  11.4  I   0.0  I   2.9  I   3.5
                      I   5.5 I   1.2  I   3.9  I   3.0  I   0.0  I   1.5  I
                      I   2.3 I   0.3  I   0.4  I   0.4  I   0.0  I   0.1  I
                     -I-------I--------I--------I--------I--------I--------I
                  35  I     8 I     0  I     1  I     1  I     0  I     0  I    10
                      I  80.0 I   0.0  I  10.0  I  10.0  I   0.0  I   0.0  I   1.0
                      I   1.9 I   0.0  I   1.0  I   0.7  I   0.0  I   0.0  I
                      I   0.8 I   0.0  I   0.1  I   0.1  I   0.0  I   0.0  I
                     -I-------I--------I--------I--------I--------I--------I
                  36  I     7 I     5  I     1  I     5  I     0  I     1  I    19
                      I  36.8 I  26.3  I   5.3  I  26.3  I   0.0  I   5.3  I   1.9
                      I   1.7 I   2.0  I   1.0  I   3.7  I   0.0  I   1.5  I
                      I   0.7 I   0.5  I   0.1  I   0.5  I   0.0  I   0.1  I
                     -I-------I--------I--------I--------I--------I--------I
                  40  I    30 I    53  I     5  I     4  I     0  I    12  I   104
                      I  28.8 I  51.0  I   4.8  I   3.8  I   0.0  I  11.5  I  10.5
                      I   7.2 I  20.7  I   4.9  I   3.0  I   0.0  I  18.5  I
                      I   3.0 I   5.4  I   0.5  I   0.4  I   0.0  I   1.2  I
                     -I-------I--------I--------I--------I--------I--------I
               COLUMN     419     256      103      135       12       65      990
                TOTAL    42.3    25.9     10.4     13.6      1.2      6.6    100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Type of Material Requested (cont.)

```
                  REQUESTP
           COUNT  I
           ROW PCT ISUBJECT   CURRICUL RESEARCH MODELS A POLICIES OTHER      ROW
           COL PCT IMATTER I UM MATER          ND TECHN                      TOTAL
           TOT PCT I      1  I      2  I      3  I      4  I      5  I      6  I
SUBJECT    --------I--------I--------I--------I--------I--------I--------I
               41  I      1 I      5 I      1 I      0 I      0 I      2 I      9
                   I   11.1 I   55.6 I   11.1 I    0.0 I    0.0 I   22.2 I    0.9
                   I    0.2 I    2.0 I    1.0 I    0.0 I    0.0 I    3.1 I
                   I    0.1 I    0.5 I    0.1 I    0.0 I    0.0 I    0.2 I
                  -I--------I--------I--------I--------I--------I--------I
               42  I     15 I     20 I      4 I      0 I      0 I      1 I     40
                   I   37.5 I   50.0 I   10.0 I    0.0 I    0.0 I    2.5 I    4.0
                   I    3.6 I    7.8 I    3.9 I    0.0 I    0.0 I    1.5 I
                   I    1.5 I    2.0 I    0.4 I    0.0 I    0.0 I    0.1 I
                  -I--------I--------I--------I--------I--------I--------I
               43  I     10 I     12 I      0 I      0 I      0 I      2 I     24
                   I   41.7 I   50.0 I    0.0 I    0.0 I    0.0 I    8.3 I    2.4
                   I    2.4 I    4.7 I    0.0 I    0.0 I    0.0 I    3.1 I
                   I    1.0 I    1.2 I    0.0 I    0.0 I    0.0 I    0.2 I
                  -I--------I--------I--------I--------I--------I--------I
               44  I      1 I      7 I      1 I      1 I      2 I      0 I     12
                   I    8.3 I   58.3 I    8.3 I    8.3 I   16.7 I    0.0 I    1.2
                   I    0.2 I    2.7 I    1.0 I    0.7 I   16.7 I    0.0 I
                   I    0.1 I    0.7 I    0.1 I    0.1 I    0.2 I    0.0 I
                  -I--------I--------I--------I--------I--------I--------I
               45  I      5 I      2 I      3 I      0 I      1 I      1 I     12
                   I   41.7 I   16.7 I   25.0 I    0.0 I    8.3 I    8.3 I    1.2
                   I    1.2 I    0.8 I    2.9 I    0.0 I    8.3 I    1.5 I
                   I    0.5 I    0.2 I    0.3 I    0.0 I    0.1 I    0.1 I
                  -I--------I--------I--------I--------I--------I--------I
               46  I     16 I      6 I      4 I      7 I      1 I      5 I     39
                   I   41.0 I   15.4 I   10.3 I   17.9 I    2.6 I   12.8 I    3.9
                   I    3.8 I    2.3 I    3.9 I    5.2 I    8.3 I    7.7 I
                   I    1.6 I    0.6 I    0.4 I    0.7 I    0.1 I    0.5 I
                  -I--------I--------I--------I--------I--------I--------I
               47  I      9 I     13 I      1 I      3 I      0 I      1 I     27
                   I   33.3 I   48.1 I    3.7 I   11.1 I    0.0 I    3.7 I    2.7
                   I    2.1 I    5.1 I    1.0 I    2.2 I    0.0 I    1.5 I
                   I    0.9 I    1.3 I    0.1 I    0.3 I    0.0 I    0.1 I
                  -I--------I--------I--------I--------I--------I--------I
            COLUMN      419      256      103      135       12       65      990
             TOTAL     42.3     25.9     10.4     13.6      1.2      6.6    100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Type of Material Requested (cont.)

```
                    REQUESTP
            COUNT  I
          ROW PCT ISUBJECT  CURRICUL RESEARCH MODELS A POLICIES OTHER      ROW
          COL PCT IMATTER I UM MATER          ND TECHN                     TOTAL
          TOT PCT I      1 I      2 I      3 I      4 I      5 I      6 I
SUBJECT   --------I--------I--------I--------I--------I--------I--------I
               48 I      1 I     13 I      0 I      1 I      0 I      2 I     17
                  I    5.9 I   76.5 I    0.0 I    5.9 I    0.0 I   11.8 I    1.7
                  I    0.2 I    5.1 I    0.0 I    0.7 I    0.0 I    3.1 I
                  I    0.1 I    1.3 I    0.0 I    0.1 I    0.0 I    0.2 I
                 -I--------I--------I--------I--------I--------I--------I
               49 I      5 I     21 I      1 I      1 I      0 I      5 I     33
                  I   15.2 I   63.6 I    3.0 I    3.0 I    0.0 I   15.2 I    3.3
                  I    1.2 I    8.2 I    1.0 I    0.7 I    0.0 I    7.7 I
                  I    0.5 I    2.1 I    0.1 I    0.1 I    0.0 I    0.5 I
                 -I--------I--------I--------I--------I--------I--------I
               51 I      8 I      2 I      4 I      1 I      0 I      0 I     15
                  I   53.3 I   13.3 I   26.7 I    6.7 I    0.0 I    0.0 I    1.5
                  I    1.9 I    0.8 I    3.9 I    0.7 I    0.0 I    0.0 I
                  I    0.8 I    0.2 I    0.4 I    0.1 I    0.0 I    0.0 I
                 -I--------I--------I--------I--------I--------I--------I
               52 I     11 I      0 I      1 I      2 I      0 I      0 I     14
                  I   78.6 I    0.0 I    7.1 I   14.3 I    0.0 I    0.0 I    1.4
                  I    2.6 I    0.0 I    1.0 I    1.5 I    0.0 I    0.0 I
                  I    1.1 I    0.0 I    0.1 I    0.2 I    0.0 I    0.0 I
                 -I--------I--------I--------I--------I--------I--------I
               53 I      3 I      0 I      0 I      1 I      0 I      0 I      4
                  I   75.0 I    0.0 I    0.0 I   25.0 I    0.0 I    0.0 I    0.4
                  I    0.7 I    0.0 I    0.0 I    0.7 I    0.0 I    0.0 I
                  I    0.3 I    0.0 I    0.0 I    0.1 I    0.0 I    0.0 I
                 -I--------I--------I--------I--------I--------I--------I
               54 I      4 I      0 I      1 I      0 I      0 I      1 I      6
                  I   66.7 I    0.0 I   16.7 I    0.0 I    0.0 I   16.7 I    0.6
                  I    1.0 I    0.0 I    1.0 I    0.0 I    0.0 I    1.5 I
                  I    0.4 I    0.0 I    0.1 I    0.0 I    0.0 I    0.1 I
                 -I--------I--------I--------I--------I--------I--------I
               56 I      6 I      4 I      1 I      0 I      0 I      0 I     11
                  I   54.5 I   36.4 I    9.1 I    0.0 I    0.0 I    0.0 I    1.1
                  I    1.4 I    1.6 I    1.0 I    0.0 I    0.0 I    0.0 I
                  I    0.6 I    0.4 I    0.1 I    0.0 I    0.0 I    0.0 I
                 -I--------I--------I--------I--------I--------I--------I
           COLUMN      419      256      103      135       12       65      990
            TOTAL     42.3     25.9     10.4     13.6      1.2      6.6    100.0
(CONTINUED)
```

Crosstabulation of ERIC Descriptor Group

by Type of Material Requested (cont.)

```
                      REQUESTP
              COUNT  I
             ROW PCT ISUBJECT  CURRICUL RESEARCH MODELS A POLICIES OTHER      ROW
             COL PCT IMATTER I UM MATER          ND TECHN                     TOTAL
             TOT PCT I      1 I      2 I      3 I      4 I      5 I      6 I
SUBJECT      --------I--------I--------I--------I--------I--------I--------I
                  61 I     10 I      6 I      1 I      2 I      0 I      2 I     21
                     I   47.6 I   28.6 I    4.8 I    9.5 I    0.0 I    9.5 I    2.1
                     I    2.4 I    2.3 I    1.0 I    1.5 I    0.0 I    3.1 I
                     I    1.0 I    0.6 I    0.1 I    0.2 I    0.0 I    0.2 I
                    -I--------I--------I--------I--------I--------I--------I
                  62 I      4 I      0 I      0 I      2 I      0 I      0 I      6
                     I   66.7 I    0.0 I    0.0 I   33.3 I    0.0 I    0.0 I    0.6
                     I    1.0 I    0.0 I    0.0 I    1.5 I    0.0 I    0.0 I
                     I    0.4 I    0.0 I    0.0 I    0.2 I    0.0 I    0.0 I
                    -I--------I--------I--------I--------I--------I--------I
                  63 I     12 I      1 I      2 I      5 I      2 I      0 I     22
                     I   54.5 I    4.5 I    9.1 I   22.7 I    9.1 I    0.0 I    2.2
                     I    2.9 I    0.4 I    1.9 I    3.7 I   16.7 I    0.0 I
                     I    1.2 I    0.1 I    0.2 I    0.5 I    0.2 I    0.0 I
                    -I--------I--------I--------I--------I--------I--------I
                  65 I      0 I      1 I      0 I      1 I      0 I      0 I      2
                     I    0.0 I   50.0 I    0.0 I   50.0 I    0.0 I    0.0 I    0.2
                     I    0.0 I    0.4 I    0.0 I    0.7 I    0.0 I    0.0 I
                     I    0.0 I    0.1 I    0.0 I    0.1 I    0.0 I    0.0 I
                    -I--------I--------I--------I--------I--------I--------I
                  71 I      5 I      2 I      2 I      1 I      0 I      2 I     12
                     I   41.7 I   16.7 I   16.7 I    8.3 I    0.0 I   16.7 I    1.2
                     I    1.2 I    0.8 I    1.9 I    0.7 I    0.0 I    3.1 I
                     I    0.5 I    0.2 I    0.2 I    0.1 I    0.0 I    0.2 I
                    -I--------I--------I--------I--------I--------I--------I
                  72 I      4 I      5 I      4 I      1 I      1 I      3 I     18
                     I   22.2 I   27.8 I   22.2 I    5.6 I    5.6 I   16.7 I    1.8
                     I    1.0 I    2.0 I    3.9 I    0.7 I    8.3 I    4.6 I
                     I    0.4 I    0.5 I    0.4 I    0.1 I    0.1 I    0.3 I
                    -I--------I--------I--------I--------I--------I--------I
                  73 I      0 I      0 I      0 I      1 I      0 I      0 I      1
                     I    0.0 I    0.0 I    0.0 I  100.0 I    0.0 I    0.0 I    0.1
                     I    0.0 I    0.0 I    0.0 I    0.7 I    0.0 I    0.0 I
                     I    0.0 I    0.0 I    0.0 I    0.1 I    0.0 I    0.0 I
                    -I--------I--------I--------I--------I--------I--------I
              COLUMN      419      256      103      135       12       65      990
               TOTAL     42.3     25.9     10.4     13.6      1.2      6.6    100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Type of Material Requested (cont.)

```
                 REQUESTP
            COUNT  I
          ROW PCT ISUBJECT  CURRICUL RESEARCH MODELS A POLICIES OTHER      ROW
          COL PCT IMATTER I UM MATER          ND TECHN                    TOTAL
          TOT PCT I     1  I     2  I     3  I     4  I     5  I     6  I
SUBJECT   --------I--------I--------I--------I--------I--------I--------I
               81 I     1  I     0  I     2  I     2  I     0  I     1  I     6
                  I  16.7  I   0.0  I  33.3  I  33.3  I   0.0  I  16.7  I   0.6
                  I   0.2  I   0.0  I   1.9  I   1.5  I   0.0  I   1.5  I
                  I   0.1  I   0.0  I   0.2  I   0.2  I   0.0  I   0.1  I
                 -I--------I--------I--------I--------I--------I--------I
               82 I     2  I     0  I     1  I     1  I     0  I     2  I     6
                  I  33.3  I   0.0  I  16.7  I  16.7  I   0.0  I  33.3  I   0.6
                  I   0.5  I   0.0  I   1.0  I   0.7  I   0.0  I   3.1  I
                  I   0.2  I   0.0  I   0.1  I   0.1  I   0.0  I   0.2  I
                 -I--------I--------I--------I--------I--------I--------I
               83 I    16  I     0  I     3  I     0  I     0  I     4  I    23
                  I  69.6  I   0.0  I  13.0  I   0.0  I   0.0  I  17.4  I   2.3
                  I   3.8  I   0.0  I   2.9  I   0.0  I   0.0  I   6.2  I
                  I   1.6  I   0.0  I   0.3  I   0.0  I   0.0  I   0.4  I
                 -I--------I--------I--------I--------I--------I--------I
               91 I     9  I     3  I     1  I     1  I     0  I     1  I    15
                  I  60.0  I  20.0  I   6.7  I   6.7  I   0.0  I   6.7  I   1.5
                  I   2.1  I   1.2  I   1.0  I   0.7  I   0.0  I   1.5  I
                  I   0.9  I   0.3  I   0.1  I   0.1  I   0.0  I   0.1  I
                 -I--------I--------I--------I--------I--------I--------I
               92 I     6  I     0  I     2  I     2  I     1  I     1  I    12
                  I  50.0  I   0.0  I  16.7  I  16.7  I   8.3  I   8.3  I   1.2
                  I   1[illegible]   0.0  I   1.9  I   1.5  I   8.3  I   1.5  I
                  I   [illegible]   0.0  I   0.2  I   0.2  I   0.1  I   0.1  I
                 -I----[illegible]--------I--------I--------I--------I--------I
           COLUMN     419      256      103      135       12       65      990
            TOTAL    42.3     25.9     10.4     13.6      1.2      6.6    100.0

RAW CHI SQUARE =   468.46606 WITH   195 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000
```

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Appendix G table 3

Crosstabulation of ERIC Descriptor Group

by Search Type

```
                     SEARCHTP
            COUNT  I
          ROW PCT  IS         SR         M          PO           ROW
          COL PCT  I                                             TOTAL
          TOT PCT  I      1  I      2  I      3  I      4  I
SUBJECT   --------I---------I---------I---------I---------I
                0  I      0  I      0  I      1  I      0  I      1
                   I    0.0  I    0.0  I  100.0  I    0.0  I    0.1
                   I    0.0  I    0.0  I    2.6  I    0.0  I
                   I    0.0  I    0.0  I    0.1  I    0.0  I
                  -I---------I---------I---------I---------I
               11  I     13  I     10  I      0  I      9  I     32
                   I   40.6  I   31.3  I    0.0  I   28.1  I    3.2
                   I    2.4  I    3.1  I    0.0  I   11.1  I
                   I    1.3  I    1.0  I    0.0  I    0.9  I
                  -I---------I---------I---------I---------I
               12  I     19  I     14  I      0  I      8  I     41
                   I   46.3  I   34.1  I    0.0  I   19.5  I    4.1
                   I    3.5  I    4.3  I    0.0  I    9.9  I
                   I    1.9  I    1.4  I    0.0  I    0.8  I
                  -I---------I---------I---------I---------I
               21  I     13  I     10  I      4  I      0  I     27
                   I   48.1  I   37.0  I   14.8  I    0.0  I    2.7
                   I    2.4  I    3.1  I   10.3  I    0.0  I
                   I    1.3  I    1.0  I    0.4  I    0.0  I
                  -I---------I---------I---------I---------I
               22  I     61  I     16  I      0  I      5  I     82
                   I   74.4  I   19.5  I    0.0  I    6.1  I    8.3
                   I   11.1  I    5.0  I    0.0  I    6.2  I
                   I    6.2  I    1.6  I    0.0  I    0.5  I
                  -I---------I---------I---------I---------I
               23  I     10  I      9  I      1  I      4  I     24
                   I   41.7  I   37.5  I    4.2  I   16.7  I    2.4
                   I    1.8  I    2.8  I    2.6  I    4.9  I
                   I    1.0  I    0.9  I    0.1  I    0.4  I
                  -I---------I---------I---------I---------I
               24  I     10  I      1  I      0  I      3  I     14
                   I   71.4  I    7.1  I    0.0  I   21.4  I    1.4
                   I    1.8  I    0.3  I    0.0  I    3.7  I
                   I    1.0  I    0.1  I    0.0  I    0.3  I
                  -I---------I---------I---------I---------I
           COLUMN        548        322         39         81       990
            TOTAL       55.4       32.5        3.9        8.2     100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Search Type (cont.)

```
                  SEARCHTP
           COUNT  I
         ROW PCT  IS       SR       M        PO             ROW
         COL PCT  I                                        TOTAL
         TOT PCT  I      1 I      2 I      3 I      4 I
SUBJECT  ---------I--------I--------I--------I--------I
              31  I     36 I     24 I      1 I      1 I      62
                  I   58.1 I   38.7 I    1.6 I    1.6 I     6.3
                  I    6.6 I    7.5 I    2.6 I    1.2 I
                  I    3.6 I    2.4 I    0.1 I    0.1 I
                 -I--------I--------I--------I--------I
              32  I     44 I     39 I      4 I      1 I      88
                  I   50.0 I   44.3 I    4.5 I    1.1 I     8.9
                  I    8.0 I   12.1 I   10.3 I    1.2 I
                  I    4.4 I    3.9 I    0.4 I    0.1 I
                 -I--------I--------I--------I--------I
              33  I     20 I     17 I      1 I      6 I      44
                  I   45.5 I   38.6 I    2.3 I   13.6 I     4.4
                  I    3.6 I    5.3 I    2.6 I    7.4 I
                  I    2.0 I    1.7 I    0.1 I    0.6 I
                 -I--------I--------I--------I--------I
              34  I     23 I      8 I      0 I      4 I      35
                  I   65.7 I   22.9 I    0.0 I   11.4 I     3.5
                  I    4.2 I    2.5 I    0.0 I    4.9 I
                  I    2.3 I    0.8 I    0.0 I    0.4 I
                 -I--------I--------I--------I--------I
              35  I      7 I      1 I      0 I      2 I      10
                  I   70.0 I   10.0 I    0.0 I   20.0 I     1.0
                  I    1.3 I    0.3 I    0.0 I    2.5 I
                  I    0.7 I    0.1 I    0.0 I    0.2 I
                 -I--------I--------I--------I--------I
              36  I     10 I      8 I      1 I      0 I      19
                  I   52.6 I   42.1 I    5.3 I    0.0 I     1.9
                  I    1.8 I    2.5 I    2.6 I    0.0 I
                  I    1.0 I    0.8 I    0.1 I    0.0 I
                 -I--------I--------I--------I--------I
              40  I     59 I     37 I      1 I      7 I     104
                  I   56.7 I   35.6 I    1.0 I    6.7 I    10.5
                  I   10.8 I   11.5 I    2.6 I    8.6 I
                  I    6.0 I    3.7 I    0.1 I    0.7 I
                 -I--------I--------I--------I--------I
          COLUMN        548      322       39       81       990
           TOTAL       55.4     32.5      3.9      8.2     100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Search Type (cont.)

```
                    SEARCHTP
            COUNT  I
          ROW PCT  IS        SR         M        PO          ROW
          COL PCT  I                                         TOTAL
          TOT PCT  I     1  I     2  I     3  I     4  I
SUBJECT   ---------I--------I--------I--------I--------I
               41  I     3  I     4  I     2  I     0  I       9
                   I  33.3  I  44.4  I  22.2  I   0.0  I     0.9
                   I   0.5  I   1.2  I   5.1  I   0.0  I
                   I   0.3  I   0.4  I   0.2  I   0.0  I
                  -I--------I--------I--------I--------I
               42  I    21  I    15  I     1  I     3  I      40
                   I  52.5  I  37.5  I   2.5  I   7.5  I     4.0
                   I   3.8  I   4.7  I   2.6  I   3.7  I
                   I   2.1  I   1.5  I   0.1  I   0.3  I
                  -I--------I--------I--------I--------I
               43  I    11  I     8  I     4  I     1  I      24
                   I  45.8  I  33.3  I  16.7  I   4.2  I     2.4
                   I   2.0  I   2.5  I  10.3  I   1.2  I
                   I   1.1  I   0.8  I   0.4  I   0.1  I
                  -I--------I--------I--------I--------I
               44  I     7  I     5  I     0  I     0  I      12
                   I  58.3  I  41.7  I   0.0  I   0.0  I     1.2
                   I   1.3  I   1.6  I   0.0  I   0.0  I
                   I   0.7  I   0.5  I   0.0  I   0.0  I
                  -I--------I--------I--------I--------I
               45  I     7  I     2  I     0  I     3  I      12
                   I  58.3  I  16.7  I   0.0  I  25.0  I     1.2
                   I   1.3  I   0.6  I   0.0  I   3.7  I
                   I   0.7  I   0.2  I   0.0  I   0.3  I
                  -I--------I--------I--------I--------I
               46  I    19  I    16  I     2  I     2  I      39
                   I  48.7  I  41.0  I   5.1  I   5.1  I     3.9
                   I   3.5  I   5.0  I   5.1  I   2.5  I
                   I   1.9  I   1.6  I   0.2  I   0.2  I
                  -I--------I--------I--------I--------I
               47  I    16  I     9  I     0  I     2  I      27
                   I  59.3  I  33.3  I   0.0  I   7.4  I     2.7
                   I   2.9  I   2.8  I   0.0  I   2.5  I
                   I   1.6  I   0.9  I   0.0  I   0.2  I
                  -I--------I--------I--------I--------I
           COLUMN       548      322       39       81        990
            TOTAL      55.4     32.5      3.9      8.2      100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Search Type (cont.)

```
                    SEARCHTP
             COUNT  I
           ROW PCT  IS         SR        M         PO        ROW
           COL PCT  I                                        TOTAL
           TOT PCT  I      1  I      2  I      3  I      4  I
SUBJECT    --------I--------I--------I--------I--------I
              48    I      7  I      9  I      1  I      0  I     17
                    I   41.2  I   52.9  I    5.9  I    0.0  I    1.7
                    I    1.3  I    2.8  I    2.6  I    0.0  I
                    I    0.7  I    0.9  I    0.1  I    0.0  I
                   -I--------I--------I--------I--------I
              49    I     17  I     13  I      1  I      2  I     33
                    I   51.5  I   39.4  I    3.0  I    6.1  I    3.3
                    I    3.1  I    4.0  I    2.6  I    2.5  I
                    I    1.7  I    1.3  I    0.1  I    0.2  I
                   -I--------I--------I--------I--------I
              51    I      9  I      3  I      0  I      3  I     15
                    I   60.0  I   20.0  I    0.0  I   20.0  I    1.5
                    I    1.6  I    0.9  I    0.0  I    3.7  I
                    I    0.9  I    0.3  I    0.0  I    0.3  I
                   -I--------I--------I--------I--------I
              52    I      6  I      5  I      1  I      2  I     14
                    I   42.9  I   35.7  I    7.1  I   14.3  I    1.4
                    I    1.1  I    1.6  I    2.6  I    2.5  I
                    I    0.6  I    0.5  I    0.1  I    0.2  I
                   -I--------I--------I--------I--------I
              53    I      3  I      1  I      0  I      0  I      4
                    I   75.0  I   25.0  I    0.0  I    0.0  I    0.4
                    I    0.5  I    0.3  I    0.0  I    0.0  I
                    I    0.3  I    0.1  I    0.0  I    0.0  I
                   -I--------I--------I--------I--------I
              54    I      5  I      0  I      1  I      0  I      6
                    I   83.3  I    0.0  I   16.7  I    0.0  I    0.6
                    I    0.9  I    0.0  I    2.6  I    0.0  I
                    I    0.5  I    0.0  I    0.1  I    0.0  I
                   -I--------I--------I--------I--------I
              56    I      8  I      2  I      0  I      1  I     11
                    I   72.7  I   18.2  I    0.0  I    9.1  I    1.1
                    I    1.5  I    0.6  I    0.0  I    1.2  I
                    I    0.8  I    0.2  I    0.0  I    0.1  I
                   -I--------I--------I--------I--------I
            COLUMN        548       322        39        81      990
             TOTAL       55.4      32.5       3.9       8.2    100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group by Search Type (cont.)

```
                  SEARCHTP
             COUNT  I
           ROW PCT  IS          SR         M          PO          ROW
           COL PCT  I                                             TOTAL
           TOT PCT  I     1  I     2  I     3  I     4  I
SUBJECT     --------I--------I--------I--------I--------I
                61  I    12  I     6  I     2  I     1  I     21
                    I  57.1  I  28.6  I   9.5  I   4.8  I    2.1
                    I   2.2  I   1.9  I   5.1  I   1.2  I
                    I   1.2  I   0.6  I   0.2  I   0.1  I
                   -I--------I--------I--------I--------I
                62  I     4  I     1  I     0  I     1  I      6
                    I  66.7  I  16.7  I   0.0  I  16.7  I    0.6
                    I   0.7  I   0.3  I   0.0  I   1.2  I
                    I   0.4  I   0.1  I   0.0  I   0.1  I
                   -I--------I--------I--------I--------I
                63  I    13  I     5  I     2  I     2  I     22
                    I  59.1  I  22.7  I   9.1  I   9.1  I    2.2
                    I   2.4  I   1.6  I   5.1  I   2.5  I
                    I   1.3  I   0.5  I   0.2  I   0.2  I
                   -I--------I--------I--------I--------I
                65  I     2  I     0  I     0  I     0  I      2
                    I 100.0  I   0.0  I   0.0  I   0.0  I    0.2
                    I   0.4  I   0.0  I   0.0  I   0.0  I
                    I   0.2  I   0.0  I   0.0  I   0.0  I
                   -I--------I--------I--------I--------I
                71  I     7  I     3  I     1  I     1  I     12
                    I  58.3  I  25.0  I   8.3  I   8.3  I    1.2
                    I   1.3  I   0.9  I   2.6  I   1.2  I
                    I   0.7  I   0.3  I   0.1  I   0.1  I
                   -I--------I--------I--------I--------I
                72  I     4  I    10  I     1  I     3  I     18
                    I  22.2  I  55.6  I   5.6  I  16.7  I    1.8
                    I   0.7  I   3.1  I   2.6  I   3.7  I
                    I   0.4  I   1.0  I   0.1  I   0.3  I
                   -I--------I--------I--------I--------I
                73  I     1  I     0  I     0  I     0  I      1
                    I 100.0  I   0.0  I   0.0  I   0.0  I    0.1
                    I   0.2  I   0.0  I   0.0  I   0.0  I
                    I   0.1  I   0.0  I   0.0  I   0.0  I
                   -I--------I--------I--------I--------I
            COLUMN      548      322        39        81        990
             TOTAL     55.4     32.5       3.9       8.2      100.0
(CONTINUED)
```

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Crosstabulation of ERIC Descriptor Group

by Search Type (cont.)

```
                   SEARCHTP
          COUNT   I
          ROW PCT IS         SR         M         PO          ROW
          COL PCT I                                           TOTAL
          TOT PCT I      1  I      2  I      3  I      4  I
SUBJECT   --------I---------I---------I---------I---------I
               81 I      5  I      1  I      0  I      0  I      6
                  I   83.3  I   16.7  I    0.0  I    0.0  I    0.6
                  I    0.9  I    0.3  I    0.0  I    0.0  I
                  I    0.5  I    0.1  I    0.0  I    0.0  I
                 -I---------I---------I---------I---------I
               82 I      5  I      0  I      1  I      0  I      6
                  I   83.3  I    0.0  I   16.7  I    0.0  I    0.6
                  I    0.9  I    0.0  I    2.6  I    0.0  I
                  I    0.5  I    0.0  I    0.1  I    0.0  I
                 -I---------I---------I---------I---------I
               83 I     17  I      0  I      3  I      3  I     23
                  I   73.9  I    0.0  I   13.0  I   13.0  I    2.3
                  I    3.1  I    0.0  I    7.7  I    3.7  I
                  I    1.7  I    0.0  I    0.3  I    0.3  I
                 -I---------I---------I---------I---------I
               91 I     10  I      5  I      0  I      0  I     15
                  I   66.7  I   33.3  I    0.0  I    0.0  I    1.5
                  I    1.8  I    1.6  I    0.0  I    0.0  I
                  I    1.0  I    0.5  I    0.0  I    0.0  I
                 -I---------I---------I---------I---------I
               92 I      4  I      5  I      2  I      1  I     12
                  I   33.3  I   41.7  I   16.7  I    8.3  I    1.2
                  I    0.7  I    1.6  I    5.1  I    1.2  I
                  I    0.4  I    0.5  I    0.2  I    0.1  I
                 -I---------I---------I---------I---------I
           COLUMN      548       322        39        81       990
            TOTAL     55.4      32.5       3.9       8.2     100.0

RAW CHI SQUARE =   213.56633 WITH   117 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000
```

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Appendix G table 4

Crosstabulation of Position of Requestor by Type of Material Requested

```
                 REQUESTP
           COUNT I
         ROW PCT ISUBJECT  CURRICUL RESEARCH MODELS A POLICIES OTHER        ROW
         COL PCT IMATTER I UM MATER          ND TECHN                      TOTAL
         TOT PCT I      1 I      2 I      3 I      4 I      5 I      6 I
POSITION --------I--------I--------I--------I--------I--------I--------I
               1 I     92 I     38 I     30 I     50 I      5 I     11 I   226
  ADMINISTRATOR  I   40.7 I   16.8 I   13.3 I   22.1 I    2.2 I    4.9 I  46.3
                 I   46.0 I   29.2 I   51.7 I   70.4 I   83.3 I   47.8 I
                 I   18.9 I    7.8 I    6.1 I   10.2 I    1.0 I    2.3 I
                -I--------I--------I--------I--------I--------I--------I
               2 I     76 I     77 I     26 I     11 I      0 I     10 I   200
  TEACHER        I   38.0 I   38.5 I   13.0 I    5.5 I    0.0 I    5.0 I  41.0
                 I   38.0 I   59.2 I   44.8 I   15.5 I    0.0 I   43.5 I
                 I   15.6 I   15.8 I    5.3 I    2.3 I    0.0 I    2.0 I
                -I--------I--------I--------I--------I--------I--------I
               3 I     32 I     14 I      2 I     10 I      1 I      2 I    61
  OTHER          I   52.5 I   23.0 I    3.3 I   16.4 I    1.6 I    3.3 I  12.5
                 I   16.0 I   10.8 I    3.4 I   14.1 I   16.7 I    8.7 I
                 I    6.6 I    2.9 I    0.4 I    2.0 I    0.2 I    0.4 I
                -I--------I--------I--------I--------I--------I--------I
               4 I      0 I      1 I      0 I      0 I      0 I      0 I     1
                 I    0.0 I  100.0 I    0.0 I    0.0 I    0.0 I    0.0 I   0.2
                 I    0.0 I    0.8 I    0.0 I    0.0 I    0.0 I    0.0 I
                 I    0.0 I    0.2 I    0.0 I    0.0 I    0.0 I    0.0 I
                -I--------I--------I--------I--------I--------I--------I
          COLUMN      200      130       58       71        6       23     488
           TOTAL     41.0     26.6     11.9     14.5      1.2      4.7   100.0

RAW CHI SQUARE =    53.53522 WITH    15 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =   502
```

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Appendix G table 5

Crosstabulation of Position of Requestor

by Search Type

```
                   SEARCHTP
            COUNT  I
           ROW PCT IS        SR        M         PO         ROW
           COL PCT I                                        TOTAL
           TOT PCT I      1  I      2  I      3  I      4  I
POSITION   --------I---------I---------I---------I---------I
                 1 I    127  I     73  I     12  I     14  I   226
  ADMINISTRATOR    I   56.2  I   32.3  I    5.3  I    6.2  I   46.3
                   I   48.7  I   42.7  I   63.2  I   37.8  I
                   I   26.0  I   15.0  I    2.5  I    2.9  I
                  -I---------I---------I---------I---------I
                 2 I    105  I     80  I      5  I     10  I   200
  TEACHER          I   52.5  I   40.0  I    2.5  I    5.0  I   41.0
                   I   40.2  I   46.8  I   26.3  I   27.0  I
                   I   21.5  I   16.4  I    1.0  I    2.0  I
                  -I---------I---------I---------I---------I
                 3 I     29  I     17  I      2  I     13  I    61
  OTHER            I   47.5  I   27.9  I    3.3  I   21.3  I   12.5
                   I   11.1  I    9.9  I   10.5  I   35.1  I
                   I    5.9  I    3.5  I    0.4  I    2.7  I
                  -I---------I---------I---------I---------I
                 4 I      0  I      1  I      0  I      0  I     1
                   I    0.0  I  100.0  I    0.0  I    0.0  I    0.2
                   I    0.0  I    0.6  I    0.0  I    0.0  I
                   I    0.0  I    0.2  I    0.0  I    0.0  I
                  -I---------I---------I---------I---------I
            COLUMN      261        171         19         37       488
             TOTAL     53.5       35.0        3.9        7.6     100.0

RAW CHI SQUARE =    25.10530 WITH     9 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0029

NUMBER OF MISSING OBSERVATIONS =   502
```

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Appendix G table 6

Crosstabulation of Type of Material Requested

by Search Type

```
                      SEARCHTP
               COUNT  I
             ROW PCT  IS        SR        M         PO          ROW
             COL PCT  I                                         TOTAL
             TOT PCT  I     1  I     2  I     3  I     4  I
REQUESTP     ---------I--------I--------I--------I--------I
                   1  I   246  I   109  I    18  I    46  I   419
  SUBJECT MATTER I I  I  58.7  I  26.0  I   4.3  I  11.0  I  42.3
                      I  44.9  I  33.9  I  46.2  I  56.8  I
                      I  24.8  I  11.0  I   1.8  I   4.6  I
                     -I--------I--------I--------I--------I
                   2  I   123  I   118  I     2  I    13  I   256
  CURRICULUM MATER I  I  48.0  I  46.1  I   0.8  I   5.1  I  25.9
                      I  22.4  I  36.6  I   5.1  I  16.0  I
                      I  12.4  I  11.9  I   0.2  I   1.3  I
                     -I--------I--------I--------I--------I
                   3  I    67  I    25  I     2  I     9  I   103
  RESEARCH            I  65.0  I  24.3  I   1.9  I   8.7  I  10.4
                      I  12.2  I   7.8  I   5.1  I  11.1  I
                      I   6.8  I   2.5  I   0.2  I   0.9  I
                     -I--------I--------I--------I--------I
                   4  I    74  I    48  I     3  I    10  I   135
  MODELS AND TECHN I  I  54.8  I  35.6  I   2.2  I   7.4  I  13.6
                      I  13.5  I  14.9  I   7.7  I  12.3  I
                      I   7.5  I   4.8  I   0.3  I   1.0  I
                     -I--------I--------I--------I--------I
                   5  I     6  I     5  I     1  I     0  I    12
  POLICIES            I  50.0  I  41.7  I   8.3  I   0.0  I   1.2
                      I   1.1  I   1.6  I   2.6  I   0.0  I
                      I   0.6  I   0.5  I   0.1  I   0.0  I
                     -I--------I--------I--------I--------I
                   6  I    32  I    17  I    13  I     3  I    65
  OTHER               I  49.2  I  26.2  I  20.0  I   4.6  I   6.6
                      I   5.8  I   5.3  I  33.3  I   3.7  I
                      I   3.2  I   1.7  I   1.3  I   0.3  I
                     -I--------I--------I--------I--------I
              COLUMN      548      322       39       81       990
               TOTAL     55.4     32.5      3.9      8.2     100.0

RAW CHI SQUARE =    90.15916 WITH    15 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000
```

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Data Table Key

Location given is county or contracting agency.

Time elapsed is given in days.

For subject codes see chapter IV.

Purpose: teach = teaching, admin = administrative

Importance: 4 = very important, 3 = somewhat important, 2 = slight importance, 1 = no importance

Pressure: 4 = great time pressure, 3 = some time pressure, 2 = slight time pressure, 1 = no time pressure

Concern: 4 = very concerned, 3 = somewhat concerned, 2 = slightly concerned, 1 = not concerned

Prior Knowledge: 4 = extensive knowledge, 3 = moderate knowledge, 2 = slight knowledge, 1 = no knowledge

Relevance: 2 = all relevant, 1 = some relevant, 0 = none relevant, ? = don't know

Novelty: 2 = all new, 1 = some new, 0 = none new, ? = don't know

Quality: 2 = high, 1 = low

Quantity: 3 = just right, 2 = too little, 1 = too much

Interview Results

number	position	location	time elapsed	subject	purpose	importance	pressure	concern	prior knowledge
1	teacher	Kern	82	301	teach.	4	1	4	3
2	admin.	Kern	89	303	teach	3	1	3	3
3	teacher	San M	71	403	teach	4	1	4	3
4	teacher	San M	83	102	teach	4	3	4	2
5	other	River.	56	405	admin	4	1	4	3
6	teacher	Kern	75	506	teach	4	1	3	2
7	other	Sacto.	63	102	admin	3	1	2	3
8	admin.	Placer	53	303	admin	4	4	4	1
9	admin.	Orange	44	302	admin	4	4	4	4
10	admin	San M.	58	202	teach	1	1	1	2
11	admin	San M.	44	102	admin	3	1	2	2
12	teacher	River.	38	201	teach	3	1	3	2
13	teacher	San M.	47	202	teach	4	1	4	2
14	other	Kern	43	202	teach	4	3	3	4
15	other	Santa B.	37	303	admin	4	3	4	3
16	other	River.	50	203	admin	4	3	4	4
17	admin.	San M.	42	302	admin	4	4	4	2
18	admin.	Glen	45	204	admin	4	1	3	-
19	teacher	El Dorado	47	303	teach	4	1	3	1
20	other	Merced	43	901	admin	4	1	4	2
21	other	Kern	37	503	teach	4	1	4	4
22	admin	Kern	63	402	admin	4	1	3	3
23	admin	Orange	35	303	admin	4	3	2	3
24	admin	Sacto.	41	302	admin	3	1	2	2
25	teacher	San M.	40	601	teach	4	1	2	1
26	admin	Santa C.	20	409	admin	4	1	1	2
27	teacher	San M.	42	405	teach	4	4	4	4

number	position	location	time elapsed	subject	purpose	impor.	pressure	concern	prior knowledge
28	?	Santa C	34	102	admin	3	4	2	2
29	admin	Kern	42	408	admin	4	4	3	4
30	other	Merced	49	204	admin	4	1	4	2
31	admin	Novato	39	303	admin	4	1	2	4
32	admin	Sacto.	41	701	admin	4	4	4	4
33	teacher	Placer	68	901	admin	4	3	4	2
34	other	River.	54	204	admin	4	4	4	2
35	admin	River.	42	202	admin	4	1	4	1
36	teacher	Riverside	46	301	teach	4	1	3	2
37	other	San M.	63	203	teach	2	3	3	4
38	admin	Santa C	50	202	admin	3	1	3	4
39	other	Orange	38	503	admin	4	3	4	4
40	other	Kern	55	302	admin	4	3	4	2
41	admin.	River.	39	302	admin	4	3	3	3
42	admin.	San M.	54	402	admin	3	1	3	4
43	teacher	River.	47	408	teach	4	1	3	2
44	admin.	Glen	50	202	admin	4	2	4	4
45	teacher	Kern	38	405	admin	4	4	4	1
46	teacher	San M.	63	306	admin	4	1	4	4
47	admin.	San M.	52	400	admin	2	1	1	NA
48	other	Santa C.	35	902	admin	3	1	3	2

Interview Results (cont.)

number	SMERC first	elsewhere 1st	new user	regular user	frequent user	relevance	novelty	quality	quantity	like mf	accept mf	dislike mf	use yet?	value	satisfied
1		x	x			?	?	1	1			x	no	no	yes
2	x				x	2	2	2	3		x		yes	no	yes
3		x	x			2	2	2	3				yes	no	yes
4	x			x		2	2	2	3		x		no	$25	yes
5	x		x			2	2	2	2		x			$40	yes
6	x		x			2	2	2	3			x	no	?	yes
7		x		x		2	1	2	3	x			no	?	yes
8	x		x			2	2	2	1			x	yes	no	yes
9		x			x	2	1	1	3		x		yes	?	
10	x			x		2	2	-	-		x		no	?	yes
11		x		x		2	1	1	3			x	yes	$400	yes
12	x				x	2	2	2	3		x		yes	$10	yes
13		x			x	2	2	2	3			x	yes	$300	yes
14		x		x		1	0	2	2			x	no	0	no
15		x		x		2	2	2	3			x	no	$300	yes
16	x			x		2	1	2	NA				yes	$1800	yes
17	x			x		2	2	-	3	x			yes	$500	yes
18		x		x		2	2	2	3	x			yes	$30	
19		x	x			1	2	2	3		NA		no	?	somewhat
20		x		x		2	1	2	2		x		yes	?	yes
21		x	x			2	1	2	3	x			no	?	yes
22	x			x		2	1	2	3	x			no	?	yes
23	.x			x		2	1	1	2			x	yes	?	yes
24		x	x			2	0	1	2			x	no	no	no

number	SMERC 1st	elsewhere 1st	new user	regular user	frequent user	relevance	novelty	quality	quantity	like mf	accept mf	dislike mf	used yet?	value	satisfied?
25	x		x			1	2	1	2		NA		no	0	no
26		x		x		2	2	-	3		x		no	$500	yes
27		x	x			2	1	2	3	x			yes	?	yes
28	x			x		2	2	2	3		NA		no	$10	yes
29		x	x			2	1	2	3	x			yes	?	yes
30		x		x		2	1	1	2			x	yes	$10	somewhat
31		x		x		2	0	2	2	x			no	0	no
32		x	x			2	1	2	3	x			yes	?	no
33		x		x		2	2	2	2	x			yes	?	yes
34		x		x		2	1	2	3		x		yes	$5,000	yes
35		x		x		0	1	2	3	x			no	?	yes
36	x			x		2	1	2	2		x		yes	?	yes
37		x		x		2	1	2	2			x	yes	?	not quite
38		x				2	1	2	3			x	yes	?	no
39	x				x	2	1	2	3			x	no	?	yes
40		x	x			2	1	2	3		NA		yes	$100	yes
41		x		x		2	1	2	3		x		yes	$400	yes
42	x				x	0	0	null result					NA	?	yes
43	x			x		2	2	2	2	x			yes	$40	yes
44		x		x		2	1	2	3	x			yes	$100	yes
45		x		x		2	2	2	3	x			yes	$320	yes
46	x				x	0	2	2	3			x	yes	?	yes
47		x		x		0	0	-	-			x	yes	?	yes
48		x			x	2	1	ok	2		NA		yes	$10	no

Appendix H

Comments from Users

psychologist:

I was really impressed with the people at SMERC. The service is excellent.

administrator:

The consistency of SMERC service is important. It's valuable in regional planning. It's more efficient to sit down at a meeting where everyone has a common base of information.

administrator:

We're awfully pleased with the service. Everybody's so nice. It's good for the image of the county locally and nationally.

teacher:

I've never had a bad search. It's the requestor's fault if they get a bad search. [You] need to be very specific.

psychologist:

You get so much information so quickly--that's the beauty of SMERC. I'd like to have a computer terminal here.

administrator:

One of the finest services--if not the finest--that the County Office of Education provides.

principal:

[SMERC] gives good basal information. Not always as comprehensive as one would hope. ... Valuable in terms of our curriculum.

teacher:

I don't think most teachers know what service is available.

teacher:

I hope the service continues to be available. It's essential to the quality of educational service. I need to obtain new ideas and don't have time to find material in the library.

principal:

Overall, in the last four to five years the quality of service has improved.

administrator:

I was disappointed. The information in SMERC was three or four years old. State of art material was missing.

resource specialist:

I just hate to go to the library. I don't mind reading. Once they send me a packet, it's like getting a present from Santa Claus.

teacher:

It's always excellent. I tell my friends about it.

teacher:

If there's a controversy, SMERC always includes both sides.

teacher:

I was amazed at the speed [of the service, but] I don't appreciate having so much reading to do. I wanted something more to the point. ...I wish they would be a little more selective. All that microfiche stuff is too hard to use.